Н

AF031384 Rattus no AB048823 Rattus no AB048824 Rattus no BD222722 Human sig AR175708 Sequence AF066823 Homo sapi AF065163 Homo sapi AF20222 Mus muscu AC102222 Mus muscu AC102222 Mus muscu AC10222 Mus muscu AC10222 Mus muscu AC10222 Mus muscu AC105977 Homo sapi AX224570 Sequence AC150884 Bos tauru AC015977 Homo sapi AX181698 Sequence BC082937 Xenopus 1 BX470123 Zebrafish AX407227 Sequence AC12829 Homo sapi AC190605 Homo sapi AC19080 Homo sapi AC19080 Homo sapi AC122827080 Homo sapi AC12827080 Homo sapi AC12827080 Homo sapi AC12827080 Homo sapi AC212827 Cavia por AF212827 Cavia por AF212827 Cavia por AF212827 Cavia por AF257082 Rattus no AF257082 Rattus no

AF031384
AB048823
AB048823
AR175708
AF006823
AF006823
AF006823
AF105222
AC102222
AC102222
AC102222
AC105298
AC102222
AC105298
AC105298
AC105298
AC105298
AC105298
AC105298
AC105298
AC1005298
AC1005298
AC1005298
AC1005298
AC1005298
AC1005298
AC1005298
AC100605

нg

S

Run

```
Mus musculus (house mouse)

Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Ver
Mammalia; Eutheria; Rodentia; Sciurognathi;

(bases 1 to 1887)
Duprat,F., Lesage,F., Fink,M., Reyes,R., He
Lazdunski,M.
TASK, a human background K+ channel to sens
near physiological pH
EMBO J. 16 (17), 5464-5471 (1997)
97459932
9312005
2 (bases 1 to 1887)
Duprat,F., Lesage,F., Fink,M., Reyes,R., He
Lazdunski,M.
Direct Submission
Submitted (05-JUN-1997) IMPC, CNRS, 660 Rou
Sophia-Antipolis, Valbonne 06560, France
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus 1
partial cds.
AF006824
AF006824.1 G1
                                                                                                         14
25
23
                                                                                                                                                                    48
                                                                                                                                                                                                                  æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
AF006824
Mus muscr
2065.5
1944
1819
1819
1819
1819
1819
1642.5
1642.5
1642.5
11000
11100
11100
11100
11100
11100
11100
11100
11100
11100
11100
11100
11100
11100
11100
11100
11100
11100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AF006824
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
 000
                                                                                                                                                                     U
                                                                                                                                                                                                                                                                                                                                                                                                                                                              U
                                                                                                                                                                                                                                                                                                                                                                                                               583
                                                                                                                                                                                                                                                                                                                                                                                                               급
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      muscu
muscu
muscu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -FGAPOP=6
                                                                                                                                                                                                                                                                                                                                                                                  Command line parameters:
-MODEL=frame+ p2n.model -DEV=xlh
-Q=/cgn2_1/USPTO_spool/US09939483/runat_15092005_111359_9696/app_query.fasta_
-Q=/cgn2_1/USPTO_spool/US09939483/runat_15092005_111359_9696/app_query.fasta_
-DB=GenEmbl -QFMT=fastap -SUFFIX=rge -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -MAXLEN=200000000000
-UNITS=bits -START=1 -END=-1 -MATRIX=100 -MAXLEN=0 -ALIGN=15 -ICPU=3
-UNITS=bits -START=1 -END=-1 -MATRIX=0 -MAXLEN=0 -LONGLOG -NCPU=6 -ICPU=3
-NO MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG -LO
                                                                               2; Search time 5685 Seconds (without alignments) 3451.955 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            printed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus
Mus
Mus
Mus
                                                                                                                                                        405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AF006824
AB008537
AB013345
AF065162
                                                                                                                                                       .....STGLHSLAAFRGLMKRRSSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No. is the number of results predicted by chance to have greater than or equal to the score of the result being a derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Descript
                                                                                                                                                                                                                                                                             9416466
           5.1.6
Compugen Ltd.
                                                         p2n model
                                                                                                                                                                                                                                                      residues
                                                                                                                                                                                                                                                                             hits satisfying chosen parameters
                                                           frame_plus
            version - 2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                  04:40:32
                                                                                                                                                                                                                                                                                                                                     .0%
100%
45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AF006824
AB008537
AB013345
AF065162
                                                                                                                                                                                          0.5
7.0
7.0
                                                                                                                                                                                                                                                     24227607955
                                                                                                                                                       ENVRTLALIVCTFTYLLVGA..
                                                                                                                                                                                          Xgapext
Ygapext
Fgapext
Delext
            GenCore
(c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ω
                                                                                  2005,
                                                          using
                                                                                                                                                                                                                                                                                                     2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length DB
                                                                                                                                                                                                                                                                                                                                      Post-processing: Minimum Match
Maximum Match
Listing first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gb ba: *
gb in: *
gb om: *
gb om: *
gb ph: *
gb ph: *
gb ro: *
gb st: *
gb vi: *
                                                                                                                                                                                               . .
                                                                                                                                -483
                                                                                                                                                                                                                                                       ведв,
                                                                                                                                                                         BLOSUM62
Xgapop 10.0
Ygapop 10.0
Fgapop 6.0
Delop 6.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1887
1888
2009
2031
                                                                                  9
                                                           search,
                        Copyright
                                                                                                                               US-09-939-
2105
1 ENVRTLAI
                                                                                  September
                                                                                                                                                                                                                                                     4708233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenEmbl
                                                                                                                                                                                                                                                                                                    length:
length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99.09
99.3
99.3
                                                           nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22...
24...
24...
24...
24...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .
8
                                                                                                                                                                                                                                                                             of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2094.5
2090.5
2090.5
2090.5
                                                                                                                                                                                                                                                                                                     sed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
                                                                                                                                             score
                                                                                                                                                                               table
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           score gand is
                                                                                                                                                                                                                                                                             number
                                                                                                                                                                                                                                                                                                    0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred
                                                           OM protein
                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                      Searched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database
                                                                                                                                                                              Scoring
                                                                                                                                                                                                                                                                                                               Maximum
                                                                                                                                                                                                                                                                                                     Minimum
                                                                                                                                           Perfect
                                                                                  6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SO
No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 2 E 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Result
                                                                                                                                                                                                                                                                             Total
                                                                                                                                Title
```

ations

vari

Hď

external

sense

and

Ç

Heurteaux,

Lucioles

des

660 Route

and

Heurteaux, C.

Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus

ROD 06-OCT-19 (TASK) mRNA,

linear - channel

χ÷

187 bp mRNA acid-sensitive

1887 TWIK-related aci

GI:2465543

ALIGNMENTS

99

240

720

260

780

280

840

299

900

```
EB-199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Faculty
2, Suita,
                                                                                                                                                                                                                                                                                                                                                                                     tomi;
                       GlyGlyGlyArgTyrSerAspThrProSerHisProCysLeuCysSerGlyThrGlnArg
                                                                                                                                                                                                                                                                                                                                                                                    Euteleost
, Murinae;
                                                                                                                                                                                                                                                                                                                                                                                 î,
                                                                                                                                                                                                                                                                                                                                                                                                                  two-por
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , Fa
-2,
                                                                                                                                                                                                                                                                                                                                   13
                                                                                                                                                                                                                                                                                                                                   ROD
                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                   bp mRNA complete cds
                                                                                                                                                                                                                                                                                                                                   1888
CTBAK,
                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                      1218
                                                                                                                                                                                                                                                                                         405
                                                                                                                                                                                                                                                                                                                                                        GI:3043543
                                                                                                                                                                                                                                                                                                                                         for
                                                                                                                                                                                                                                                                                       LysArgArgSerSerVal
                                                                                                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                                                  AB008537
Mus musculus r
AB008537
AB008537.1 G:
                                                                                                                                                                                                                                                                                                                                                                              Mus musculus
                                                                                                                                                                                                                                                                           1141
                                                                                                                                                                                                                                                                                                      1201
                                                                                                                                                                       320
                                                                                                                                                                                                    340
                                                                                                                                                                                                                                                                                         400
                                                                  721
                                                                                                                                          300
                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                             380
                                       661
                                                                                  261
                                                                                                                            841
                                                                                                                                                        901
                                                                                                                                                                                     196
                                                                                                                                                                                                                  021
                                                                                                                                                                                                                                              081
          601
                        221
                                                                                               781
                                                                                                              281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                  LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                    RESULT 2
AB008537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                      유
                                                                                                                            පු
                                                                                                                                                        d
                                                                                                                                                                                     셤
                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                      ద
                                                                  d
                                                                                               a
                        ò
                                                     ð
                                                                                  슝
                                                                                                              ð
                                                                                                                                          ò
                                                                                                                                                                       ò
                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                         à
                                                         /codon_start=1
/product="TWIK-related acid-sensitive K+ channel"
/product="TWIK-related acid-sensitive K+ channel"
/protein_id="AAC53367.1"
/db_xref="G1:2465544"
/translation="ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLE
LRARYNLSEGGYEELERVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDG
GKVFCMFYALLGIPLTLIMFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIG
FVSCISTLCIGAAAFSYYERWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYV
AFSFVYILTGLTVIGAFLNLVVLRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCL
SGSLGDGVRPRDPVTCAAAAGGVGVGVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQ
YSIPMIIPRDLSTSDTCVEHSHSSPGGGGRYSDTPSHPCLCSGTQRSAISSVSTGLHS
                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                        100
                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                                  140
                                                                                                                                                                                                                                                                                                                                                                                                                               420
                                                                                                                                                                                                                                                                                                                                                                                                                                               160
                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   220
                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                           80
                                                                                                                                                                                                                                                                    40
                                                                                                                                                                                                                                                                                                                                     GGCTCC
                                                                                                                                                                                                                                                                                                          GCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                    rreulle
                                                                                                                                                                                                                                                                                                                                                                                                                 sArgAla
||||||||
|CCGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gluarg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTCGGC
                                                                                                                                                                                                                                                                                                                            aGlySer
                                                                                                                                                                                                                                                                                                                                                                    CAGCACG
                                                                                                                                                                                                                                                                                                                                                                                            |||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       yPheGly
                                                                                                                                                                                                                                                                                                                                                                                                                                              eGly
                                                                                                                                                                                                                                                  2392995
                                                                                                                                                                                                                                                                           CGAGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  lAlaPhe
                                                                                                                                                                                                                                                                                               uLeuGlu
                                                                                                                                                                                                                                                                                                                                                        SerThr
                                                                                                                                                                                                                                                                   GluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                             \snMetValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AlaValPheAspAlaLeuGluSerGluProGluMetIleGluArgGlnArgLe
                                                                                                                                                                                                                                                                                              PheTyrPheAlaIleThrValIleThrThrIleGlyTyrGlyHisAlaAlaFrd
                                                                                                                                                                                                                                                                                                                                                                                                                Met PheGlnSerLeuGlyGluArgileAsnThrPheValArgTyrLeuLeuHi
                                                                                                                                                                                                                                                                                                                                                                                                                             TrpThrPhePheGlnAlaTyrTyrTyrCysPheIleThrLeuThrThrIleGl;
                                                                                                                                                                                                                                                                                                                                                                                                                                              ArgValValLeuArgLeuLysProHisLysAlaGlyValGlnTrpArgPheAl
                                                                                                                                                                                                                                                                                                                                     CGCGTCGTGCTGCGCCTCAAGCCGCACAAGGCCGGCGTGCAGTGCAGTGCGTTCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AspTyrValAlaLeuGlnLysAspGlnAlaLeuGlnThrGlnProGlnTyrVa
                                                     subunit
                                                                                                                                                                      1887
405
0
0
1
                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                     channel
                                                     자
†
                                                                                                                                                                                                          Gaps
                ="taxon:10090"
                                                                                                                                                                                                                        x AF006824 (1-1887)
                                           /gene="TASK"
note="pore-forming
codon_start=1
/organism="Mus mu
/mol_type="mRNA"
/db_xref="taxon:1"
                                                                                                                                          LAAFRGLMKRRSSV"
                   1.46e-172
2094.50
99.75%
99.75%
99.50%
                                                                                                                                                                                                                         (1-405)
                                                                                                                                                                                     Percent Similarity:
Best Local Similarity
                                                                                                                                                                Scores
                                                                                                                                                                                                                         -09-939-483-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   201
                                                                                                                                                                                                                                                     Ч
                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                               141
                                                                                                                                                                                                                                                                   21
                                                                                                                                                                                                                                                                                               41
                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                        81
                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                     101
                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                   Query Match:
DB:
                          gene
                                                                                                                                                               Alignment
                                                                                                                                                                       Š.
                                      CDS
                                                                                                                                                                             Score:
                                                                                                                                                  ORIGIN
                                                                                                                                                                       Pred
                                                                                                                                                                                                                         SO
                                                                                                                                                                                                                                                    Б
                                                                                                                                                                                                                                                                                 a
a
                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                                                   원
                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <del>Q</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     엄
```

ò

ò

ò

ð

a

ð

ð

ð

ð

à

ð

8

1020

339

319

960

1080

359

1140

379

1200

Ţ

Ø S

Ď

```
Mus musculus (house mouse)

Mus musculus (house mouse)

Mus musculus

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

I (bases 1 to 2009)

Fujita, A., Horio, Y. and Kurachi, Y.

Mouse cTBAK

L Published Only in DataBase (1998)

E (bases 1 to 2009)

E 2 (bases 1 to 2009)

S Fujita, A., Horio, Y. and Kurachi, Y.

Direct Submission

L Submitted (23-APR-1998) Akikazu Fujita, Osaka University, Faculty of Medicine, Department of Pharmacology II; Yamada-oka 2-2, Suita, Osaka 565, Japan (E-mail:afujita@med.id.yamagata-u.ac.jp, Tel:81-6-879-3512, Fax:81-6-879-3519)

Tel:81-6-879-3512, Fax:81-6-879-3519)
                                                                                                                                                                                                                                                1042
                                                                                                                                                                                                                                                                                  1102
                                                                                                                                                                                                                                                                                                                                                                                                                                  ROD 21-MAY-1998
                                                                                                                                                                                                                                                                 359
                                                                               260
                                                                                                                   280
                                                                                                                                                       299
                                                                                                                                                                       922
                                                                                                                                                                                          319
                                                                                                                                                                                                                             39
                                                                                                                                                                                                                                                                                                    379
                                                                                                                                                                                                                                                                                                                                        399
                                                                                                                                     862
         220
                                            240
                                                             742
                                                                                                802
                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                 2009 bp mRNA cTBAK, complete cds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .2009
/organism="Mus musculus"
/mol_type="mRNA"
/db_xref="taxon:10090"
136. .1365
                                                                                                                                                                                                                                                                                                                                                                                              1240
                                                                                                                                                                                                                                                                                                                                                                            405
                                                                                                                                                                                                                                                                                                                                                                                                                                 AB013345
Mus musculus mRNA for c AB013345
AB013345.1 GI:3149958
cTBAK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             GI:3149958
                                                                                                                                                                                                                                                                                                                                                                           LysArgArgSerSerVal
                                                                                                                                                                                                                                                                                   1043
                                                                                                                                                                                                                                                                                                                                                                            400
                                                                                                                                                                                                                                                                                                                                                                                              1223
                                                                                                                                                                        863
                                                                                                                                                                                                                                                                                                                      1103
                                                                                                                                                                                                                                                                                                                                         380
                                                                                241
                                                                                                                                                                                           300
                                                                                                                                                                                                             923
                                                                                                                                                                                                                               320
                                                                                                                                                                                                                                                983
                                                                                                                                                                                                                                                                  340
                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                           1163
                           623
                                                              683
                                                                                                 743
                                                                                                                                     803
                                            221
                                                                                                                    261
                                                                                                                                                       281
                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 3
AB013345
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                      Б
                                                                                                                                                                                                                                                                                                                                                           요
                      g
                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                   셤
                                                             g
                                                                                                 셤
                                                                                                                                     g
                                                                                                                                                                        a
                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                               셤
                                            ð
                                                                                8
                                                                                                                   ò
                                                                                                                                                       à
                                                                                                                                                                                           à
                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                            8
                                                 /gene="mctbak"
/codon_start=1
/protein_id="BAA25436.1"
/protein_id="BAA25436.1"
/brotein_id="BAA2544"
/translation="MKRQNVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELR
QLELRARYNLSEGGYEELERVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPS
TDGGKVFCMFYALLGIPLTLVMFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMV
LIGFVSCISTLCIGAAAFSYYERWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQP
QYVAFSFVYILTGLTVIGAFLNLVVLRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGL
SCLSGSLGDGVRPRDPVTCAAAAGGVGVGGSGFRNVYAEVLHFQSMCSCLWYKSRE
KLQYSIPMIIPRDLSTSDTCVEHSHSSPGGGGRYSDTPSHPCLCSGTQRSAISSVSTG
LHSLAAFRGLMKRRSSV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 622
                                                                                                                                                                                                                                                                                                                                                                                                                                                              100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              562
                                                                                                                                                                                                                                                                                                                                                                    142
                                                                                                                                                                                                                                                                                                                                                                                                       202
                                                                                                                                                                                                                                                                                                                                                                                                                                           262
                                                                                                                                                                                                                                                                                                                                                 40
                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                          80
                                                                                                                                                                                                                                                                                                                                                                                     uLeuGlu
|||||||
GCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rrenlle
                                                                                                                                                                                                                                                                                                                                                uGluLeu
|||||||
GGAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                         aglyser
||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      euilegly
||||||||
rcArcGGr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              lGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                             SerThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BArgAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rGluArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TrpThrPhePheGlnAlaTyrTyrTyrCysPheIleThrLeuThrThrIleGl
                                                                                                                                                                                                                                                                                                              ArgvalvalLeuArgLeuLysProHisLysAlaGlyValGlnTrpArgPheAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                              aPr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AspGlyGlyLysValPheCysMetPheTyrAlaLeuLeuGlyIleProLeuTh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    riciacirceccarcaccarcaccaccarcecciaregrangere
                                                                                                                                                                                                                                                                                                                                                 Alaval Phe Asp Ala Leu Glu Ser Glu Pro Glu Met Ile Glu Arg Glu Arg L
                                                                                                                                                                                                                                                                                                                                                              aAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PheValSerCys1leSerThrLeuCys1leGlyAlaAlaAlaPheSerTy
                                                                                                                                                                                                                                                                                                                                                                                                                                                              BAI
                                                                                                                                                                                                                              GlyHi
                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            PheTyrPheAlaIleThrValIleThrThrIleGly
                                                                                                                                                                                           A nucleotides
                                                                                                                                                                                                                                                                                             -1888
mol_type="mRNA"
db_xref="taxon:10090
tissue_type="heart"
                                                                                                                                                                                                                                                                                             Ċ
                                                                                                                                                                                 /gene="mctbak"
/note="15 A nu
                             /gene="mctbak"
                                                                                                                                                                                                                                                                                             537
                                                                                                                                                                                                                             3.25e-172
2090.50
99.75%
99.26%
99.31%
                                                                                                                                                                                                                                                                                           AB008!
                                          .1243
                          .1888
                                                                                                                                                                                                                                                                                              ×
                                                                                                                                                                        188
                                                                                                                                                                                                                                                                                             -405)
                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                             C,
                                                                                                                                                                                                                      Scores
                                                                                                                                                                                                                                                                                             -483-5
                                                                                                                                                                         polyA_site
                                                                                                                                                                                                                                                                                                                                                                                       41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                               Н
                                                                                                                                                                                                                                                                                                                                                   2
                                                                                                                                                                                                                                                                                                                                                                    83
                                                                                                                                                                                                                                                                                                                                                                                                        143
                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                           203
                                                                                                                                                                                                                                                                                                                                                                                                                                                             81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101
                                                                                                                                                                                                                                                        Best Local Si
Query Match:
DB:
                                                                                                                                                                                                                               No.:
                                                                                                                                                                                                                     Alignment
Pred. No.:
                           gene
                                                                                                                                                                                                                                                                                             939
                                            CDS
                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                             -60-
                                                                                                                                                                                                                                        core
```

Ċ

ದ್ದ

ठे

8

ઠે

ద

ò

a

δ

셤

ద

δ

ð

a

ð

윤

ठे

<del>Q</del>

ઠે

원

Š

```
1165
                                                                             281
                                                                                                            300
                                                                                                                          1045
                                                                                                                                                          1105
                                                                                                                                                                                                                      1225
                                                                                                                                                                                                                                      380
                                                                                                                                                                                                                                                                      400
                                                                                                                                                                                                                                                                                     1345
               241
                                              261
                                                                                                                                          320
                                                                                                                                                                          340
                                                                                                                                                                                                        360
                              2
                                                             Ŋ
                                                                                            985
                                                                                                                                                                                                                                                      Ŋ
                                                                                                                                                                                                                                                      128
                                                                                                                                                                                                                                                                                                                          DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                    RESULT 4
AF065162
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                         qq
                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                      g
                                                             셤
                                                                            ਨੇ
                                                                                           셤
                                                                                                           ð
                                                                                                                          엄
                                                                                                                                                                         ଚ
                                                                                                                                                                                       셤
                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                     g
                                              ò
                                                                                                                                          ठे
/product="cTBAK"
/product="cTBAK"
/product="cTBAK"
/protein_id="BAA28349.1"
/db_xref="G1:3149959"
/translation="MKRQNVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELR
QLELRARYNLSEGGYEELERVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPS
TDGGKVFCMFYALLGIPLTLVMFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMV
LIGFVSCISTLCIGAAAFSYYERWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQP
QYVAFSFVYILTGLTVIGAFLNLVVLRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGL
SCLSGSLGDGVRPRDPVTCAAAAGGVGVGVGGSGFRNVYAEVLHFQSMCSCLWYKSRE
KLQYSIPMIIPRDLSTSDTCVEHSHSSPGGGGRYSDTPSHPCLCSGTQRSAISSVSTG
LHSLAAFRGLMKRRSSV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   744
                                                                                                                                                                                                                                                                                                                                          100
                                                                                                                                                                                                                                                                                                                                                          444
                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                         140
                                                                                                                                                                                                                                                                                                                                                                                                                        564
                                                                                                                                                                                                                                                                                                                                                                                                                                       160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  864
                                                                                                                                                                                                                              204
                                                                                                                                                                                                                                                             264
                                                                                                                                                                                                                                                                                            324
                                                                                                                                                                                                                                                                                                                           384
                                                                                                                                                                                                                                                                                                                                                                                         504
                                                                                                                                                                                                                                                                                                                                                                                                                                                      624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   804
                                                                                                                                                                                                                                              40
                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                            80
                                                                                                                                                                                                                                                                                                                                                                  hrleulle
||||
                                                                                                                                                                                                                                                                                                                        CGGCTCC
                                                                                                                                                                                                                                                                                                                                                                                 |||||:::
ACTAGIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rGluArg
                                                                                                                                                                                                                        ||||||
|-||||||
                                                                                                                                                                                                                                                       uLeuGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                CATCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PheGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  uValVal
                                                                                                                                                                                                                                                                                                                                                                                                        sArgAla
                                                                                                                                                                                                                                                                                                                                                                                                                cereere
                                                                                                                                                                                                                 ಥ
                                                                                                                                                                                                                                             uGluLeu
                                                                                                                                                                                                                                                                                           GCTGGAG
                                                                                                                                                                                                                                                                                                                                          oSerThr
                                                                                                                                                                                                                                                                                                                                                         CAGCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTTCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    lAlaPhe
                                                                                                                                                                                                                                                                                                            aGlySer
                                                                                                                                                                                                                                                                                                                                                                                                                                        ullegly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cgagcgc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GACTATGTGGCGCTGCAGAAGGACCAGGCGCTGCAGACGCAGCGCGCAGTATGTGGCCTTC
                                                                                                                                                                                                                GlyAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PheTyrPheAlaIleThrValIleThrThrIleGlyTyrGlyHisAlaAlaPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rVa
                                                                                                                                                                                                              MetPheGlnSerLeuGlyGluArgIleAsnThrPheValArgTyrLeuLeuHi
                                                                                                                                                                                                                                                                                                                                                                                                                                       sArgGlyLeuGlyMetArgHisAlaGluValSerMetAlaAsnMetValLe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cecercerecrececercaaeceecacaaeeceeeeerecaeaeaeeee
                                                                                                                                                                                                                                                                                                                                                                                                                                                егТугТу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    oGlnTy
                                                                                                                                                                                                                                                                                                            nTrpA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PhevalSerCysIleSerThrLeuCysIleGlyAlaAlaAlaPheS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nPr(
                                                                                                                                          200
2 4 0 3
1 0 0 1 1
                                                                                                                                                                                                                                                                                                            <u>G</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    aLeuGlnThrGl
                                                                                                                                                                                                                                                                                                            Val(
                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                          rgLeuLysProHisLysAlaGly
                                                                                                           A nucleotides"
                                                                                                                                                                                               2009)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    saspGlnAl
                                                                                                                                                                                                (1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    euGlnLy
                                                                                                                                          2
                                                                                                                                                                                                AB01334
                                                                                                                                         3.52e-17
2090.50
99.75%
99.26%
99.31%
                                                                                                           /note="15
                                                                                                                                                                                                                                                                                                             euA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rValAlaL
                                                                                                                                                                                                 ×
                                                                                                                                                                                                                                                                                                           rgvalvalL
                                                                                                                                                                                                (1-405)
                                                                                                                                                       ent Similarity:
Local Similarity
Y Match:
                                                                                                                                  Scores
                                                                                                                                                                                                S
                                                                                                                                                                                                -483
                                                                                                                                                                                                                                                                                           265
                                                                                                                                                                                                                                                                                                                                                          385
                                                                                                                                                                                                                Н
                                                                                                                                                                                                                              145
                                                                                                                                                                                                                                              21
                                                                                                                                                                                                                                                             205
                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                           325
                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                                                                                                                                                                                                                          101
                                                                                                                                                                                                                                                                                                                                                                                         445
                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                        505
                                                                                                                                                                                                                                                                                                                                                                                                                                        141
                                                                                                                                                                                                                                                                                                                                                                                                                                                       565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  805
                                                                                                                                                                                                                                                                             47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   221
                                                                                                                                                                                                -939
                                                                                                                                  Alignment
                                                                                                                                          Š
                                                                                                                                                 Score:
Percent
                                                                                                                                                               Best I
Query
DB:
                                                                                                                                                                                                US-09
                                                                                                                                          red
```

g

8

В

ò

셤

ð

임

ò

셤

ð

Б

à

g

ઠે

면

ð

g

ò

엄

ð

ò

ద

집

ð

```
1164
                                                                                                                                                                                                                                                                                              1224
                                                                                                                                   1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               03-NOV-2000
                                                                                                                                                                                       1104
                                                    280
 260
                           924
                                                                               984
                                                                                                        299
                                                                                                                                                             319
                                                                                                                                                                                                                 339
                                                                                                                                                                                                                                                                     359
                                                                                                                                                                                                                                                                                                                         379
                                                                                                                                                                                                                                                                                                                                                  128
                                                                                                                                                                                                                                                                                                                                                                             399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    potassium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (house mouse)
Mus musculus
Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Muses, C.M., Gallagher, P.G., Buck, M.E., Butler, M.H. and Goldstein, S.A.
Proton block and voltage gating are potassium-dependent in the cardiac leak channel Kcnk3
J. Biol. Chem. 275 (22), 16969-16978 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2020,000

2 (bases 1 to 2031)

S Goldstein,S.A.N.

Direct Submission

L Submitted (13-MAY-1998) Section of Developmental Biology and Biophysics, Department of Pediatrics, Yale University School of Medicine, 295 Congress Avenue, New Haven, CT 06536, USA

S Location/Qualifiers

1. 2031

/ organism="Mus musculus"
/ mol_type="mRNA"
/ db_xref="taxon:10090"
/ tissue_type="heart"
/ db_xref="taxon:10090"
/ tissue_type="heart"
/ do xref="taxon:10090"
/ tissue_type="heart"
/ codon_start=1
/ product="Kcnk3 channel"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               οĘ
                                                                                                                                                                                                              SerAlaIleSerSerValSerThrGlyLeuHisSerLeuAlaAlaPheArgGlyLeuMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ROD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2031 bp mRNA linear channel mRNA, complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GI:11093517
                                                                                                                                                                                                                                                                                                                                                                                                                               LysargargserServal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AF065162
Mus musculus Kcnk3 o
AF065162
AF065162.1 GI:11093
```

Ţ Ø

Ø

S

1320

359

1380

379

1440

tandem

in

Franci

Euteleostomi Murinae;

1140

299

319

1200

339

rg

S

m 48

```
GlyGlyGlyArgTyrSerAspThrProSerHisProCysLeuCysSerGlyThrGlnArg
                                                 Met CysSerCysLeuTrpTyrLysSerArgGluLysLeuGlnTyrSerIleProMetIle
                                                                                                                                                                                                                                        IleProArgAspLeuSerThrSerAspThrCysValGluHisSerHisSerFroGly
                                                                                                                                                                                                                                                                                                                                    acid-sensitive K+ channel (
                                                                                                                                                                                                                                                                                                                                                                                                                                                Kindler, C.H., Han and Yost, C.S. two pore domains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Leonoudakis, D., Gray, A.T., Winegar, B.D., Kindler, C.H., Leonoudakis, D., Gray, A.T., Winegar, B.D., Kindler, C.H., Taylor, D.M., Chavez, R.A., Forsayeth, J.R. and Yost, C.S. Direct Submission
Submitted (24-OCT-1997) Dept. of Anesthesia, UC San Francisco, CA 94143-0542, USA
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                             Craniata; Vertebrata;
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          104. .1339
/gene="TASK"
/function="open rectifier potassium channel
/function="baseline potassium channel"
                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus.

1 (bases 1 to 2077)
Leonoudakis,D., Gray,A.T., Winegar,B.D., Ki
Taylor,D.M., Chavez,R.A., Forsayeth,J.R. an
An open rectifier potassium channel with tw
cloned from rat cerebellum
J. Neurosci. 18 (3), 868-877 (1998)
9437008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Rattus norvegicus"
/mol_type="mRNA"
/db_xref="taxon:10116"
/tissue_type="cerebellum"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                     2077 bp
                                                                                                                                                                                                                                                                                                                                              TWIK-related
                                                                                                                                                                                                                                                                                                                                                                                          Rattus norvegicus (Norway rat)
Rattus norvegicus
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                              405
                                                                                                                                                                                                                                                                                                                                                                         GI:2809390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="TASK"
104. .1220
                                                                                                                                                                                                                                                                                              AAGCGCAGGAGCTCGGTG
                                                                                                                                                                                                                                                                               erval
                                                                                                                                                                                                                                                                                                                                   AF031384
Rattus norvegicus Ti
mRNA, complete cds.
AF031384
AF031384.1 GI:2809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1, .2077
                                                                                                                                                                                                                                                                              LysArgArgSerS
                                                                                                                                                                                                                                                                                                 1441
                                                                                                                                                                                                                                                           1381
                                                                                                                                                                                                                                                                               400
                                                                                      300
                                                                                                                           320
                                                                                                                                                                340
                                                                                                                                                                                                    360
                                                                                                                                                                                                                                          380
                                                                                                         1141
                                                                                                                                             201
                                                                                                                                                                                 261
                                                                                                                                                                                                                      1321
                                                  281
                                                                    1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bource
                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                  AF031384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                   요
                                                                                                                                            엄
                                                                                                                                                                                 원
                                                                                                                                                                                                                      임
                                                                                                                                                                                                                                                           <del>a</del>
                               유
                                                                                                        셤
                                                                                                                          ð
                                                                                                                                                               ð
                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                              ઠે
                                                  ਠੋ
                                                                                      8
/protein_id="AAG29339.1"
/db_xref="GI:11093518"
/translation="MKRQNVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELR
QLELRARYNLSEGGYEELERVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPS
TDGGKVFCMFYALLGIPLTLVMFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMV
LIGFVSCISTLCIGAAAFSYYERWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQP
QYVAFSFVYILTGLTVIGAFLNLVVLRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGL
SCLSGSLGDGVRPRDPVTCAAAAGGVGVGVGSGFRNVYAEVLHFQSMCSCLWYKSRE
KLQYSIPMIIPRDLSTSDTCVEHSHSSPGGGGRYSDTPSHPCLCSGTQRSAISSVSTG
LHSLAAFRGLMKRRSSV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     260
                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                100
                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                         140
                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   960
                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                           80
                                                                                                                                                                                                                                                   40
                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ValLeuileGly
                                                                                                                                                                                                                                                  uGluLeu
|||||||
GGAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                       sArgAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                luLeuGlu
|||||||
\GCTGGAG
                                                                                                                                                                                                                                                                                                                           laglyser
||||||||
ccccrcc
                                                                                                                                                                                                                                                                                                                                                                                                              ||||||
|CACTAGIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rcereere
                                                                                                                                                                                                             CAGCACG
                                                                                                                                                                                                                                                                                                                                                                                                   AspGlyGlyLysValPheCysMetPheTyrAlaLeuLeuGlyIleProLeuThrLeuIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gAlaLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rGluArg
                                                                                                                                                                                                                                                                                                                                                                aAlaProSerThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGAGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        crrceec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1AlaPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 uValVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        eGlyPheGly
                                                                                                                                                                                                                                                                                                                           ArgValValLeuArgLeuLysProHisLysAlaGlyValGlnTrpArgPheAla
                                                                                                                                                                                                                                                                                                                                                                                                                                        AspTyrValAlaLeuGlnLysAspGlnAlaLeuGlnThrGlnProGlnTyrVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    erTy
                                                                                                                                                                                                                                                                                                                                                                PheTyrPheAlaileThrValileThrThrileGlyTyrGlyHisAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  aAlaPhe
                                                                                                                          2031
403
2
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BPhelleThrL
                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   aAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                erCyslleSerThrLeuCyslleGlyAl
                                                                                                                                                                        Gaps
                                                                                                                                                                                           (1-2031)
                                                                                                                                                                                                            uAlaLeuIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        x AF065162
                                                                                                                          3.56e-172
2090.50
99.75%
99.26%
99.31%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rpThrPhePheGlnAl
                                                                                                                                                                                                            grhrL
                                                                                                                                            ent Similarity:
Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Phevals
                                                                                                                                                                                           <del>ا</del>
                                                                                                                  Scores
                                                                                                                                                                                           ņ
                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                       41
                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        961
                                                                                                                                                                                           -483
                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                81
                                                                                                                                                                                                                                                                                                                                                                                                    101
                                                                                                                                                                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   161
                                                                                                                                  Score:
Percent Simi
Best Local S
Query Match:
DB:
                                                                                                                Alignment
Pred. No.:
                                                                                                                                                                                           -939.
                                                                                                                                                                                           OS-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         名
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                       ਠੇ
                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ਠੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                  ઠે
```

ρ

```
298
                                                                                                                           1073
                                                                                                                                                    1133
                                                                                                                                                                                           378
                                                                                                                                                                                                                     398
                                                                                                                                                                                                                                  1313
                   833
                                261
                                                          281
                                                                                                1013
                                                                                                             318
                                                                                                                                        338
                                                                                                                                                                 358
                                                                                                                                                                              1193
                                                                                                                                                                                                        1253
      241
                                             893
                                                                       953
                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                              ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                    JOURNAL
JOURNAL
AUTHORS
TITLE
                                                                                                                                                                                                                                             AB048823
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene
                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDS
                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                d
                                                                                                                                                                              g
                                                                                                                                                                                                        셤
                                             셤
                                                                                                                                                   d
                                                                                                                                                                                                                                  엄
                                ठे
                                                          ð
                                                                                    8
                                                                                                             ઠે
                                                                                                                                       ð
                                                                                                                                                                  ઠ
                                                                                                                                                                                           ð
                                                                                                                                                                                                                     ઠે
          /codon_start=1
/product="TWIK-related acid-sensitive K+ channel"
/product="TWIK-related acid-sensitive K+ channel"
/protein_id="AAC39952.1"
/db_xref="GI:2809391"
/translation="MKRQNVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELR
QLELRARYNLSEGGYEELERVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPS
TDGGKVFCMFYALLGIPLTLVMFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMV
LIGFVSCISTLCIGAAAFSYYERWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQP
QYVAFSFVYILTGLTVIGAFLNLVVLRFMTMNAEDEKRDAEHRALLTHNGQAGGLGGL
SCLSGSLGDGVRPRDPVTCAAAAGGMGVGVGVGSGFRNVYAEMLHFQSMCSCLWYKS
REKLQYSIPMIIPRDLSTSDTCVEHSHSSPGGGGRYSDTPSHPCLCSGTQRSAISSVS
TGLHSLATFRGLMKRRSSV"
                                                                                                                                                                                                                                                                               100
                                                                                                                                                                                                                                                                                           412
                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                     472
                                                                                                                                                                                                                                                                                                                                  140
                                                                                                                                                                                                                                                                                                                                               532
                                                                                                                                                                                                                                                                                                                                                            160
                                                                                                                                                                                                                                                                                                                                                                         592
                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                   652
                                                                                                                                                                                                                                                                                                                                                                                                                200
                                                                                                                                                                                                                                                                                                                                                                                                                            712
                                                                                                                                                                                                                                                                                                                                                                                                                                         220
                                                                                                                                                                                                                                                                                                                                                                                                                                                      772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                832
                                                                                                                                                                                                              232
                                                                                                                                                                                                                                        292
                                                                                                                                                                                                                                                                  352
                                                                                                                                                                                                 40
                                                                                                                                                                                                                                                     80
                                                                                                                                                                                    17.
                                                                                                                                                                                                                           9
                                                                                                                                                                                                 uGluLeu
|||||||
GGAGCTG
                                                                                                                                                                                                                                                                                                                                                                                     rGluArg
                                                                                                                                                                                                                                                    aGlySer
                                                                                                                                                                                                                                                                             oSerThr
                                                                                                                                                                                                                                                                                                                                                                                                               yPheGly
                                                                                                                                                                               0000000
                                                                                                                                                                                                                                                                                                                | | | | | : : :
ACTAGTC
                                                                                                                                                                                                                                                                                                                                                                     CATCGGT
                                                                                                                                                                                                                                                                                                                                                                                               TGAGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  uValVal
                                                                                                                                                                                                                                                                                                                                 ullegly
                                                                                                                                                                                                                                                                                                                                                                                                                                         aPhe
                                                                                                                                                                                                                                      SCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   uLeuGlu
                                                                                                                                                                                                                                                                                                       rLeulle
                                                                                                                                                                                                                                                                 ceecrec
                                                                                                                                                                                                                                                                                           CAGCACG
                                                                                                                                                                       G1yA1
                                                                                                                                                                      PheTyrPheAlaileThrValileThrThrileGlyTyrGlyHisAlaAlaPro
                                                                                                                                                                                                                                                                                                       LysArgGlyLeuGlyMetArgHisAlaGluValSerMetAlaAsnMetValLe
                                                                                                                                                                                                                                                                                                                                                                                                               ď
                                                                                                                                                                                                                                                      eAl
                                                                                                                                                                                                                                                                                                                                                                                     AAGAGGGGCTGGGCATGCGGCACGCCGAGGTGTCCATGGCCAACATGGTGCT
                                                                                                                                                                                                                                                     rpArgPh
and
                                                                                                            2077
400
3
2
3
                                                                                                                                                                                                                                                     ValGlnT
                                                                                                                                                                                                                                                                                                                                                                                                                                          aLeuGlnThrGlnP
 ьщ
                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
domains
                                                                                                                                                                                                                                                     [G]
-[G]
                                                                                                                                                                                                                                                      ₫.
                                                                                                                                                                                                                                                     SLYSAL
pore
                                                                                                                                                          2077)
                                                                                                                                                                                                                                                                                                                                                                                                                                          nLysAspGlnAl
                                                                                                                                                                                                                                                    roHi:
tandem
                                                                                                                                                           ij
                                                                                                                                                                                                                                                     euArgLeuLysP:
                                                                                                                                                          AF03138
                                                                                                            5.5e-170
2065.50
98.77%
98.04%
98.12%
                                                                                                                                                                                                                                                                                                                                                                                                                                          aLeuGl
     sensitive
                                                                                                                                                           ×
                                                                                                                                                                                                                                                    gvalvalL
                                                                                                                                                          -405)
                                                                                                                                                                                                                                                                                                                                                                                                                                          AspTyrVal
                                                                                                                      J
                                                                                                       Scores
                                                                                                                                                          S
                                                                                                                                                                                    113
                                                                                                                                                                                                 21
                                                                                                                                                                                                             173
                                                                                                                                                                                                                                                                                           353
                                                                                                                                                                                                                                                                                                                                              473
                                                                                                                                                                                                                                                                                                                                                                                                                            653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                773
                                                                                                                                                                                                                            47
                                                                                                                                                                                                                                        233
                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                  293
                                                                                                                                                                                                                                                                               81
                                                                                                                                                                                                                                                                                                        101
                                                                                                                                                                                                                                                                                                                     413
                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                            141
                                                                                                                                                                                                                                                                                                                                                                         533
                                                                                                                                                                                                                                                                                                                                                                                      161
                                                                                                                                                                                                                                                                                                                                                                                                   593
                                                                                                                                                                                                                                                                                                                                                                                                                                                       713
                                                                                                                                                                        Н
                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                          201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   221
                                                                                                                                                          83
                                                                                                                                                           4-
                                                                                                      Alignment
Pred. No.:
                                                                                                                                                          σ
                                                                                                                                                          -93
                                                                                                                          Percent
                                                                                                                   Score
                                                                                                                                       Query
DB:
                                                                                                                                                          -09
                                                                                                                                Best
                                                                                                                                                          S
                                                                                                                                                                                    a
                                                                                                                                                                                                              В
                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                               유
                                                                                                                                                                                                                                                                                                                                                                                                   유
                                                                                                                                                                                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <del>Q</del>
                                                                                                                                                                       ठे
                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                 ò
                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ਨੇ
                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                            ð
```

```
Kattus:

S Obya, S., Kitsukawa, M. and Imaizumi, Y.

TASKI splice bvariant (TASKIb) (KCNK3b)

L Published Only in DataBase (2000)

E 2 (bases 1 to 1324)

S Obya, S., Kitsukawa, M. and Imaizumi, Y.

Direct Submission

L Submitted (13-SEP-2000) Susumu Obya, Nagoya City University,

Department of Molecular and Cellular Pharmacology; 3-1 Tanabedori,

Mizuhoku, Nagoya 4678603, Japan (E-mail:sohya@phar.nagoya-cu.ac.jp,

Tel:81-52-8363433, Fax:81-52-8363432)

Tel:81-52-8363433, Fax:81-52-8363432)
                                                                                                                      1012
                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear ROD 14-OCT-2000 splice bvariant (TASK1b),
                                                                                                                                                                     1072
                                                                                                                                                                                                                                                                 1192
  260
                                                280
                                                                      952
                                                                                              297
                                                                                                                                            317
                                                                                                                                                                                           337
                                                                                                                                                                                                                                          357
                                                                                                                                                                                                                                                                                                                 125
                         892
                                                                                                                                                                                                                                                                                          377
                                                                                                                                                                                                                                                                                                                                         397
                                                                                                                                                                                                                                                                                                                                                                131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Euteleostomi; Murinae;
Craniata; Vertebrata; I
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            1324 bp mRNA mRNA for TASK1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .1324
/organism="Rattus norvegicus"
/mol_type="mRNA"
/db_xref="taxon:10116"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                        405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rattus norvegicus (Norway rat)
Rattus norvegicus
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tissue_type="brain"
                                                                                                                                                                                                                                                                                                                                                                                      LeuMetLysArgArgSerSerVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KCNK3b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="KCNK3b"
14. .1192
/gene="KCNK3b"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GI:10801597
                                                                                                                                                                                                                                                                                                                                                                                                                                                          AB048823
Rattus norvegicus K
complete cds.
AB048823
AB048823.1 GI:1080
```

-

280

805

297

S

```
Ohya, S., Kitsukawa, M. and Imaizumi, Y.

TWIK-related acid-sensitive K+ channel (TASK1) (KCNK3) splice variant
variant

Published Only in DataBase (2000)

(bases 1 to 1313)

Ohya, S., Kitsukawa, M. and Imaizumi, Y.

Direct Submission

Submitted (13-SEP-2000) Susumu Ohya, Nagoya City University,

Department of Molecular and Cellular Pharmacology; 3-1 Tanabedori,

Mizuhoku, Nagoya 4678603, Japan (E-mail:sohya@phar.nagoya-cu.ac.jp,

Tel:81-52-8363433, Fax:81-52-8363432)
                                                                                                                                                                                                                                                                                                                                                                                                                 Rattus norvegicus (Norway rat)
Rattus norvegicus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sprice
                                                                                                                                                                                                                                                                                                                                                        AB048824
Rattus norvegicus KCNK3c mRNA for TWIK-related acid-sensitive K-channel sprice variant (TASK1c), complete cds.
AB048824
AB048824.1 GI:10801599
                                                                                                     ValGlyValGlyValGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPhe
                                                                                                                                         GlnSerMetCysSerCysLeuTrpTyrLysSerArgGluLysLeuGlnTyrSerIlePro
                                                                                                                                                                               ccaddadgcgccgccgcracagcgacacccrcacacccrraccrigicalgcagcgacg
        CTGCGATTCATGACCATGAACGCCGAGGACGAGAAGCGTGATGCAGAGCACCGTGCGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     channel
                                                                                                                                                                                                                       BProCysLeuCy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     X
+
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     acid-sensitive
                                                                                                                                                                                                                       rSerAspThrProSerHi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Rattus norvegicus"
/mol_type="mRNA"
/db_xref="taxon:10116"
/sex="male"
/tissue_type="aotra"
1. .1313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene= ...
276. .1181
/gene="KCNK3c"
/codon_start=1
/product="TWIK-related a/
--:ant (TASK1c)"
                                                                                                                                                                                                                                                                                                                     σ
                                                                                                                                                                                                                                                                                                  405
                                                                                                                                                                                                                                                                                                                     118
                                                                                                                                                                                                                                                                                                LeuMetLysArgArgSerSerVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene="KCNK3c"
                                                                                                                                                                                                                       ProglyGlyGlyGlyArgTy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . .1313
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rattus.
1 (sites)
                                                                                                                                                                                                                                                                                                                     1166
         686
                                              746
                                                                281
                                                                                    806
                                                                                                       298
                                                                                                                        998
                                                                                                                                           318
                                                                                                                                                              926
                                                                                                                                                                                 338
                                                                                                                                                                                                  986
                                                                                                                                                                                                                      358
                                                                                                                                                                                                                                         046
                                                                                                                                                                                                                                                            378
                                                                                                                                                                                                                                                                               1106
                                                                                                                                                                                                                                                                                                  398
                           261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                           LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                       RESULT 7
AB048824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                             <del>Q</del>
                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                         <del>Q</del>
                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                     a
                                             엄
                                                                                 a
                                                                                                      à
                                                                                                                       원
                                                                                                                                           ð
                                                                ठे
                                                                                                                                                                                8
                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                  ઠે
/product="TASK1 splice bvariant (TASK1b)"
/protein_id="BAB16710.1"
/db_xref="G1:10801598"
/translation="MKRQNVRTLALIVCTFTYLLESELRQLELRARYNLSEGGYEELE
RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGIPLT
LVMFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFS
YYERWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIGA
FLNLVVLRFMTMNAEDEKRDAEHRALLTHNGQAGGLGGLSCLSGSLGDGVRPRDPVTC
AAAAGGMGVGVGVGSGFRNVYAEMLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTS
DTCVEHSHSSPGGGGRYSDTPSHPCLCSGTQRSAISSVSTGLHSLATFRGLMKRRSSV
"
                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           625
                                                                                                                                                                                                                                                                                                                                                                                       100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     260
                                                                                                                                                                                                                                                                                                                                                                   205
                                                                                                                                                                                                                                                                                                                                                                                                         265
                                                                                                                                                                                                                                                                                                                                                                                                                                                325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  685
                                                                                                                                                                                                                                                                                                                                                 80
                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                     40
                                                                                                                                                                                                                                                                                        85
                                                                                                                                                                                                                                                                                                                              14
                                                                                                                                                                                                                                                  70
                                                                                                                                                                                                                                                                                                                                                 aglyser
                                                                                                                                                                                                                                                                                --GAGCTG
                                                                                                                                                                                                                                                                                                                       GCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                CAGCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gAlaLeu
                                                                                                                                                                                                                                                                                                                                                             CGGCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ullegly
                                                                                                                                                                                                                              oSerThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PhevalserCysileSerThrLeuCysIleGlyAlaAlaAlaPheSerTyrTyrGluArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             uleuglu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sArgAla
                                                                                                                                                                                                                                                                     AlavalPheAspAlaLeuGluSerGluProGluMetIleGluArgGlnArgLeuGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PheGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ValLe
                                                                                                                                                                                                                                                                                                                                                                                     ArgvalvalLeuArgLeuLysProHisLysAlaGlyvalGlnTrpArgPheAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LeuArgPheMetThrMetAsnAlaGluAspGluLysArgAspAlaGluHisAr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rCysPhelleThrLeuThrThrIleGl
                                                                                                                                          1324
381
3
2
22
4
                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                         Gaps
                                                                                                                                                                                                            (1-1324)
                                                                                                                                                                                                                                                                                 -CTGGAGTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rpThrPhePheGlnAlaTyrT;
                                                                                                                                                                                                            AB048823
                                                                                                                                                                                                                                                                                                                                                                                                                          sValPheCy
                                                                                                                                           59
                                                                                                                                         1.19e-15
1944.00
94.12%
93.38%
92.35%
                                                                                                                                                                                                             ×
                                                                                                                                       Pred. nc.
Score:
Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                             (1-405)
                                                                                                                                  Scores
                                                                                                                                                                                                            ų.
                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                       71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99
                                                                                                                                                                                                            9-483
                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                        206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                            41
                                                                                                                                                                                                                                                                                                                               86
                                                                                                                                                                                                                                                                                                                                                                    146
                                                                                                                                                                                                                                                                                                                                                                                       81
                                                                                                                                                                                                                                                                                                                                                                                                                             101
                                                                                                                                                                                                                                                                                                                                                                                                                                                266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                Alignment
Pred. No.:
                                                                                                                                                                                                            -93
                                                                                                                                                                                                            0S-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                  원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                   Б
                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
```

r-2000 K+

1045

357

925

337

985

317

1165

Ø

```
anism="Homo sapiens"
_type="genomic DNA"
                                                                                                                                                                          405
                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
1. .1551
/organism="Homo sapie/mol_type="genomic DP
                                                                                                                                                                         yLeuMetLysArgArgSerSerVal
                   ValArgProAr
                    uGlyAsp
                                                                                                                                                                                                                                                                                                                 OS H
PN J
PD C
PF 2
PR 2
O1-OCT
                                                                                                                                                                                                                                                                                                                                                             Pr
PC
PC
PC
                    280
                                794
                                                                      317
                                                                                                                       357
                                                                                                                                    1034
                                                                                                                                                             1094
                                                                                                                                                                                      1154
                                             297
                                                         854
                                                                                                                                                 377
                                                                                                                                                                          397
                                                                                   914
                                                                                               337
                                                                                                           974
                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                           ACCESSION
VERSION
                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                 BD222722
LOCUS
                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                       KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                  COMMENT
                                엄
                                                                                                                                                             d
                                                         DP
                                                                                  유
                                                                                                           g
                                                                                                                                    g
                                                                                                                                                                                      g
                    8
                                             8
                                                                      ð
                                                                                               8
                                                                                                                        ò
                                                                                                                                                ò
                                                                                                                                                                          ð
                    IGFGDYVALQKDQ
AEHRALLTHNGQA
VYAEMLHFQSMCS
PSHPCLCSGTQRS
              AKRGLGMRHAEV
                                                                                                                                                                                                                                  100
                                                                                                                                                                                                                                              253
                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                   140
                                                                                                                                                                                                                                                                                                            160
                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                       220
                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                        260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                280
                                                                                                                                                                   103
                                                                                                                                                                                            133
                                                                                                                                                                                                                                                                      313
                                                                                                                                                                                                                                                                                                                        433
                                                                                                                                                                                                                                                                                                                                                 493
                                                                                                                                                                                                                                                                                                                                                              200
                                                                                                                                                                                                                                                                                                                                                                          553
                                                                                                                                                                                                                                                                                                                                                                                                  613
                                                                                                                                                                                                                                                                                                                                                                                                                           673
                                                                                                                                                                                                                                                                                                                                                                                                                                                    733
                                                                                                                                                                                                                     193
                                                                                                                                                                                                         80
                                                                                                                                                       40
                                                                                                                                                                                9
                                                                                                                                                                                                                                                                 |||||:
                                                                                                                                                                                                                                                                                                                                              ATGAGCG
                                                                                                                                                                                                                                                                                                                                                                                                              euValVa
||||||||
TCGTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                      rgAlaLe
                                                                                                                                                                                                                                          CCAGCAC
                                                                                                                                                                                                                                                                                                                    TCATCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGCGCT
                                                                                                                              GlyAla
                                                                                                                                                                                           GTTGGA
                                                                                                                                                                                                                                  oSerTh
                                                                                                                                                                                                                                                                                   sArgAl
                                                                                                                                                                                                                                                                                                                                     rGluAr
                                                                                                                                                                                                                                                                                                                                                                         scrrces
                                                                                                                                                       GluLen
                                                                                                                                                                               ArgGlnLeuGluLeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGlu-LeuGl
                                                                                                                                                                                                                    CCGGCTC
                                                                                                                                                                                                                                                          hrleuil
                                                                                                                                                                                                                                                                                                           eullegl
                                                                                                                                                                                                                                                                                                                                                                                      alAlaPh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                lySerLe
                                                                                                                                                                                                                                                                                                                                                              yPheGl
                                                                                                                                                                                                                                                                                                                                                                                                  rescert
                                                                                                                                                                                                                                                                                           ACCGTGC
                                                                                                                                                                                                        aG1yS
                                                                                                                              1rTyrLeuLeuval
|||||||||||||
|CTACCTGCTGGTG
/protein_id="BAB16711.1"
/db_xref="GI:10801600"
/translation="MFYALLGIPLTLVMFQSLGERINTFVRYLLHRASMANMVLIGFVSCISTLCIGAAAFSYYERWTFFQAYYYCFITLTTIGALQTQPQYVAFSFVYILTGLTVIGAFLNLVVLRFMTMNAEDEKRDAFGLGGLSCLSGSLGDGVRPRDPVTCAAAAGGMGVGVGVGGSGFRNVYCLWYKSREKLQYSIPMIIPRDLSTSDTCVEHSHSSPGGGGRYSDTPSAISSVSTGLHSLATFRGLMKRRSSV"
                                                                                                                                                                                                                                                         euTl
                                                                                                                                                                                                                                                                CCGCTCAC
                                                                                                                                                                                                                                                                                                                                                            BASpGlnAlaLeuGlnThrGlnProGlnTyrVa
                                                                                                                                                                                                        uArgValValLeuArgLeuLysProHisLysAlaGlyValGlnTrpArgPheA
                                                                                                                                                                                                                                nArgle
                                                                                                                                                                                           -crccrccraccccccrccrca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                uLeuThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuSerG
                                                                                                                                                                                                                                                          eProL
                                                                                                                                                       eGluArgGl
                                                                                                                                                                                                                                                         131.
370
4
8
8
37
                                                                     Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                     -1313)
                                                                                                                  Ċ
                                                                                                                  AB048824
                                                                    9.76e-15
1876.00
91.44%
90.46%
89.12%
                                                                                                                  ×
                                                                                                                 (1-405)
                                                                                 ent Similarity:
Local Similarit
Y Match:
                                                               Scores
                                                                                                                 ហ
                                                                                                                 -483-
                                                                                                                                          23
                                                                                                                                                      21
                                                                                                                                                                  83
                                                                                                                                                                               41
                                                                                                                                                                                                         9
                                                                                                                                                                                                                                 80
                                                                                                                                                                                                                                            194
                                                                                                                                                                                                                                                         100
                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                           140
                                                                                                                                                                                                                                                                                                                       374
                                                                                                                                                                                                                                                                                                                                    160
                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                      200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                260
                                                                                                                                                                                           104
                                                                                                                                                                                                                    134
                                                                                                                                                                                                                                                                     54
                                                                                                                                                                                                                                                                                                                                                434
                                                                                                                                                                                                                                                                                                                                                                         494
                                                                                                                                                                                                                                                                                                                                                                                                              220
                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                              Ч
                                                                                                                                                                                                                                                                                               314
                                                                                                                                                                                                                                                                                                                                                                                                                           614
                                                                                                                                                                                                                                                                                                                                                                                                                                                   674
                                                                                                                                                                                                                                                                                                                                                                                                  54
                                                               Alignment
Pred. No.:
                                                                                                                 -939
                                                                                Percent
Best Loc
Query Ma
DB:
                                                              Alignme
Pred. N
Score:
                                                  ORIGIN
                                                                                                                 60-
                                                                                                                 SD
                                                                                                                                                                                                                                             Б
                                                                                                                                                                                                                                                                     d
                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                  엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                    d
                                                                                                                                         g
                                                                                                                                                                  d
                                                                                                                                                                                          원
                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                           d
                                                                                                                                                      ò
                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                             ठ
                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                  ठे
                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                      ઠે
```

```
\mathbf{PC}
                                                                                                                                                                                                                                                                              1033
                                                                                                                                                                                                                                                                                                                                                                                                             53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (human)

Homo sapiens (human)

JP 2002519030-A/68

02-JUL-2002

25-JUN-1999 JP 2000557363

26-JUN-1998 US 60/090762,31-JUL-1998 US 60/094983 PR

26-JUN-1998 US 60/102686,11-DEC-1998 US 60/112129 PI PREET1

L, Y TOM TANG,GINA A GORGONE,NEIL C CORLEY,KARL J PI GUEGLER,
MARIAH R BAUGHN,INGRID E AKERBLOM,JANICE AU YOUNG,HENRY YUE,
CHANDRA PATTERSON,ROOPA REDDY,JENNIFER L HILLMAN,OLGA BANDMAN

C12N15/09,A61K38/00,A61K39/395,A61K45/00,A61P9/00,A61P15/00,
A61P25/00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PREETI
                                                                                                                                                                                337
                                                                                                                                                                                                                                                                                                             377
                  793
                                                297
                                                                                853
                                                                                                                317
                                                                                                                                                913
                                                                                                                                                                                                                                                                                                                                             109
                                                                                                                                                                                                                                                                                                                                                                              397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  \mathbf{PC}
                                                                                                                                                                                                                                                                                                                                                                                                               7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C12N1/19,
C12N1/21,C12N5/10,C12P21/02,C12Q1/68,G01N33/68//C12P21/08,
                                                                   -G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Corley, N.C., Guegler, K.J., I, J.A., Yue, H., Patterson, C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; E
Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                gAspProvalThrCysAlaAlaAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                organism='Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Clzni,
2N15/00,
A61K37/02,C12N5/00
Incyte Clone No: 1229438
Location/Qualifiers
1. .1551
1. .1551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human signal peptide-containing protein.
BD222722
BD222722
BD222722
BD222722.1 GI:33032492
JP 2002519030-A/68.
Homo sapiens (human)
Homo sapiens (human)
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Ve
Mammalia; Eutheria; Primates; Catarrhini;
1 (bases 1 to 1551)
Lal, P., Tang, Y.T., Gorgone, G.A., Corley, N.
Baughn, M.R., Akerblom, I.E., Young, J.A., Yu
Reddy, R., Hillman, J.L. and Bandman, O.
Human signal peptide-containing protein
Patent: JP 2002519030-A 68 02-JUL-2002;
INCYTE PHARMACEUTICALS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1178
```

301 GlyValGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGlnSerMet	Qy         361 GlyGlyArgTyrSerAspThrProSerHisProCysLeuCysSerGlyThrGlnArgSer 380	RESULT 9 AR175708 LOCUS AR175708 LOCUS AR175708 LOCUS AR175708 ACCESSION AR175708 VERSION AR175708.1 GI:17917007 KEYWORDS ORGANISM Unknown. ORGANISM Unknown. ORGANISM Unknown. REFERENCE 1 (bases 1 to 2514) AUTHORS Dubrat, F., Lesage, F., Fink, M. and Lazdunski, M.	် ရိ	Alignment Scores:  Pred. No.:  Score: Score: Percent Similarity: Best Local Similarity: B6.41%  Caps:  Alignment Score:  Antches:  Conservative:  Mismatches:  Antches:  Caps:  Antch:  Antch: Antch	US-09-939-483-5 (1-405) x AR175708 (1-2514)  Oy
ORIGIN Alignment Scores: Pred. No.: Score: Score: Best Local Similarity: Best Local Similar	Oy 1 GluAsnValArgThrLeuAlaLeuIleValCysThrPheThrTyrLeuLeuValGlyAla 20 :::	Qy         61 ArgValValLeuArgLeuLy8ProHisLy8AlaGlyValGlnTrpArgPheAlaGlySer 80           Db         221 CGCGTCGTGCTGCCCTCAAGCCGCACAAGGCCGGCGTGCAGTGGCGCTTCGCCGGCTCC 280           Qy         81 PheTyrPheAlaIleThrValIleThrThrIleGlyTyrGlyHisAlaAlaProSerThr 100           Db         281 TTCTACTTCGCCATCACCGTCATCACCACCACCACGCGCCACCCAGCACG           Qy         101 AspGlyGlyLy8ValPheCy8MetPheTyrAlaLeuLeuGlyIleProLeuThrLeuIle 120           Qy         101 AspGlyGlyLy8ValPheCy8MetPheTyrAlaLeuLeuGlyIleProLeuThrLeuIle 120           Db         341 GATGGCGGCAAGGTGTTCTGCATGTTCTACGCGCTGCTGGCTCACCGCTCACGCTCGTC	121 MetPheGlnSerLeuGlyGluArgIleAsnThrPheValArgTyrLeuLeuHisArgAla 1	Oy 161 PheValSerCysIleSerThrLeuCysIleGlyAlaAlaAlaAheSerTyrTyrGluArg 180	Qy         201 AspTyrValAlaLeuGlhLysAspGlnAlaLeuGlnThrGlnFroGlnTyrValAlaPhe 220           IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII

rg

S 1 3

5

```
/yeure="TASK"

126. .1310
/gene="TASK"
/note="pore-forming K+ channel subunit"
/codon_start=1
/codon_start=1
/product="TWIK-related acid-sensitive K+ channel"
/protein_id="AAC51777.1"
/db_xref="G1:2465542"
/translation="MKRQNVRTLALIVCTFTYLLVGAAVFDALESEPELIERQRLELR
QQELRARYNLSQGGYEELERVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPS
TDGGKVFCMFYALLGIPLTLVMFQSLGERINTLVRYLLHRAKKGLGMRRADVSMANMV
LIGFFSCISTLCIGAAAFSHYEHWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQP
QYVAFSFVYILTGLTVIGAFLNLVVLRFMTMNAEDEKRDAEHRALLTRNGQAGGGGG
GSAHTTDTASSTAAAGGGGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLS
TSDTCVEQSHSSPGGGRYSDTPSRRCLCSGAPRSAISSVSTGLHSLSTFRGLMKRRS
SV"
                                       Euteleostomi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ||||||||
cgcagcaggagctgcggcgcgctacaacctcagccagggcggctacgaggagctggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ArgGinLeuGluLeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGluLeuGlu
                                                                                                                                                                                                                           Lucioles
                                                                              and
                                                                                                         ЬH
                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; F., Lesage, F., Fink, M., Reyes, R., Heurteaux, C. and Lazdunski, M.
TASK, a human background K+ channel to sense external pinear physiological phemar phemar physiological phemar physiological phemar phemar phemar physiological phemar phe
                                                                                                        external
                                                                                                                                                                                     Heurteaux, C
                                                                                                                                                                                                                          des
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 590
57
                                                                                                                                                                                                                           Route
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0 m 0 0 0 m 0
                                                                                                                                                                                                                         3, 660 F
France
                                                                                                                                                                                    Fink, M., Reyes, R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
Mismatches:
Indels:
                                                                                                                                                                     2 (bases 1 to 2590)
Duprat, F., Lesage, F., Fink, M., Reyes
Lazdunski, M.
Direct Submission
Submitted (05-JUN-1997) IMPC, CNRS,
Sophia-Antipolis, Valbonne 06560, Fr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
1. .2590
/gene="TASK"
126. .1310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (1-2590)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           x AF006823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2.09e-148
1819.00
90.37%
88.15%
86.41%
              (human)
                                                                                                                                                                                                                                                                 .2590
           Homo sapiens
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-939-483-5 (1-405)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                  sourc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No.:
                          ORGANISM
                                                                REFERENCE
AUTHORS
                                                                                                                                             MEDLINE
PUBMED
                                                                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment
                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                    AUTHORS
                                                                                                                                  JOURNAL
 KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                   FEATURES
                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  06-OCT-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               380
                           120
                                                                               140
                                                                                                                                  160
                                                                                                                                                                                    180
                                                                                                                                                                                                            674
                                                                                                                                                                                                                                       200
                                                                                                                                                                                                                                                                                        220
                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                260
                                                                                                                                                                                                                                                                                                                                                                                                                         914
                                                                                                                                                                                                                                                                                                                                                                                                                                                   280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   400
                                                     494
                                                                                                       554
                                                                                                                                                                                                                                                                734
                                                                                                                                                                                                                                                                                                                 794
                                                                                                                                                                                                                                                                                                                                                                      854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATGAAG
                                                                                             111111
                                                                                                                                                                                                                                                                                                                                                                                            CAGCACG
                          rLeulle
                                                                             sArgAla
                                                                                                                                                                                                                                                                                       erMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ullegly
                                                                                                                                                                                    GluArg
                                                                                                                                                                                                            CGAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Serlen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATCATC
                                                     GCTCGTC
                                                                                                                                                                                                                                                                CTTCGGC
                                                                                                                                                                                                                                                                                                                                          uValVal
                                                                                                                                                                                                                                                                                                                                                                      cereere
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tllelle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     uMetLys
                                                                                                                                                                                                                                       yPheG1y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            --GGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GlyVal
                                                                                                                                                       CATCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRI 06-
(TASK)
                                                                                                                                                                                                                                                                                                                                                                                                                                               TrpThrPhePheGlnAlaTyrTyrTyrCysPheIleThrLeuThrThrIleGl
                                                                                                                                                                                                                                                                                                                                          TTCTACTTCGCCATCACCGTCATCACCACCATCGGCTACGGGCACGCGGCACC
                                                                           linear
+ channel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90 bp mRNA acid-sensitive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25
ated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ы
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     :246554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ArgArgSerSerVal
||||||||||||||
CGCAGGAGCTCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \mathbf{GI}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AF006823
Homo sapiens complete cds.
AF006823
AF006823.1 G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1173
                          101
                                                   435
                                                                                                      S
                                                                                                                                141
                                                                                                                                                         555
                                                                                                                                                                                                            615
                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                              675
                                                                                                                                                                                                                                                                                        201
                                                                                                                                                                                                                                                                                                                 735
                                                                                                                                                                                                                                                                                                                                           221
                                                                                                                                                                                                                                                                                                                                                                    ហ
                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                        855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              293
ហ
                                                                            121
                                                                                                                                                                                    161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      401
                                                                                                      49
                                                                                                                                                                                                                                                                                                                                                                      79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 10
AF006823
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                  g
                                                                                                     원
                                                                                                                                                        d
                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                              d
                                                                                                                                                                                                                                                                                                                 а
                                                                                                                                                                                                                                                                                                                                                                    원
                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            원
                                                                                                                               ò
                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                        8
                                                                            ð
                                                                                                                                                                                   8
                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
```

194

254

40

314

9

374

80

100

rg

S

ß 48

S ന g

g 0

Ø

of

ß

원

ద

ठ

ð

요

a

ठे

a

8

셤

õ

쉽

a

δ

원

ઠે

a

ઠે

ð

윤

ઠે

d

ð

δ

ð

셤

ਨੇ

8

8

```
/codon_start=1
/product="Kcnk3 channel"
/protein_id="AAG29340.1"
/protein_id="AAG29340.1"
/bb_xref="GI:11093520"
/translation="MKRQNVRTLALIVCTFTYLLVGAAVFDALESEPELIERQRLELR
QQELRARYNLSQGGYEELERVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPS
TDGGKVFCMFYALLGIPLTLVMFQSLGERINTLVRYLLHRAKKGLGMRRADVSMANMV
LIGFFSCISTLCIGAAAFSHYEHWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQP
QYVAFSFVYILTGLTVIGAFLNLVVLRFMTMNAEDEKRDAEHRALLTRNGQAGGGGG
GSAHTTDTASSTAAAGGGGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLS
TSDTCVEQSHSSPGGGRYSDTPSRRCLCSGAPRSAISSVSTGLHSLSTFRGLMKRRS
                                                                                                                                                                                             potassium
 Craniata; Vertebrata; Euteleostomi
Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                               다
                                                                                  2 (bases 1 to 2590)
Goldstein, S.A.N.
Direct Submission
Submitted (13-MAY-1998) Section of Developmental Biology and Biophysics, Department of Pediatrics, Yale University School Medicine, 295 Congress Avenue, New Haven, CT 06536, USA Location/Qualifiers
                                                                                                                                                                                            cardiac
                                        potassium-dependent
                         and
                         Butler, M.H
                                                                                                                                                  /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/tissue_type="heart"
126. .1310
/note="two P domain potassium channel;
channel; KCNK3; OAT1; TASK1; TBAK1"
                                                                                                                                                                                                                                                                                                                                       2590
357
9
25
14
                                                          (2000)
                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
Eukaryota; Metazoa; Chordata; Craniata; Mammalia; Eutheria; Primates; Catarrhin 1 (bases 1 to 2590)
Lopes, C.M., Gallagher, P.G., Buck, M.E., Goldstein, S.A.
Proton block and voltage gating are pot cardiac leak channel Kcnk3
J. Biol. Chem. 275 (22), 16969-16978 (2
                                                                                                                                                                                                                                                                                                                                                                                                 -2590)
                                                                                                                                                                                                                                                                                                                                                                                                 ರ
                                                                                                                                                                                                                                                                                                                                                                                                AF065163
                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                      2.09e-14
1819.00
90.37%
88.15%
86.41%
                                                                                                                                             .2590
                                                                                                                                                                                                                                                                                                                                                                                                 ×
                                                                                                                                                                                                                                                                                                                                                                                                 (1-405)
                                                                                                                                                                                                                                                                                                                                              Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                      J. Biol.
20287574
10748056
2 (bacc
                                                                                                                                                                                                                                                                                                                               Scores
                                                                                                                                                                                                                                                                                                                                                                                                 -483-5
                                                                                                                                                                                                                                                                                                                                                                                                                 Н
                                                                                                                                                                                                                                                                                                                                                                                                                                 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                  21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    101
                                                                                                                                             ource
                                                                                                                                                                                                                                                                                                                                       No.:
                                                         JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                               Alignment
                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                            JOURNAL
                                                                                                                                                                                     CDS
                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                 US-09-93
                                          TITLE
                                                                                                                                                                                                                                                                                                                                       Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ਨੇ
                                                                                                                                                                                                                                                                                                                                                       1052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1292
                                                                                                                                                                                                                                                                                                                                                                                                                         1172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                         123
                                                                                                                                   200
                                                                                                                                                                                                                                                                                                                                                                        340
                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         400
  120
                  494
                                  140
                                                                   160
                                                                                                   180
                                                                                                                   674
                                                                                                                                                                    220
                                                                                                                                                                                     794
                                                                                                                                                                                                     240
                                                                                                                                                                                                                                       260
                                                                                                                                                                                                                                                                       280
                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                       320
                                                                                                                                                                                                                                                                                                                                                                                                                                         380
                                                  554
                                                                                                                                                    734
                                                                                                                                                                                                                      854
                                                                                                                                                                                                                                                      914
                                                                                                                                                                                                                                                                                       953
         |||||:::
GCTCGTC
                                              2252522
                                                                                                  rGluArg
                                                                                                                                  YPheGly
||||||||
CTTCGGC
 rLeulle
                                                                uilegly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ø
                                                                                                                                                                                                                     cereere
                                                                                                                                                                                                                                                                                                                                                                      CATCGGC
                                                                                                                 CGAGCAC
                                                                                                                                                                                                   ySerLeu
                                                                                                                                                                                                                                                                                                                                                       GTCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                        GGGAGGG
                                                                                                                                                                                                                                                                                      --GGT
                                                                                                                                                                                                                                                                                                   aAlaAlaGlyGlyValGlyVal
                                                                                                                                                                                                                                                                                                                                       nSerMet
                                                                                                                                                                                                                                                                                                                                                                                                        oglygly
                                  sArgAl
ProArgAspLeuSerThrSerAspThrCysValGluHisSerHisSerFre
                                                                                                 GlyValGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGl
                                                                 PRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
cds.
                                                                                                                                                                                                                                                                                                              mRNA
complete
                                                                                                                                                                                                                                                                                                    spProValThrCysAlaAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90 bp
mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          259
channel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0.0
                                                                                                                                                                                                                                                                                                     GlyAspValArgProArgA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ArgArgSerSerVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    G
                                                                                                                                                                                                                                                                                                                                                                                                                                        GlyGlyArgTyr
||||||||||||
GGCGGCCGCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          55163
5 sapiens
55163
55163.1 G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sapiens
sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AF065
Homo
AF065
AF065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ношо
 6
                                                  95
                                                                                  55
                                                                                                                                                   675
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           401
                                                                                                   161
                                                                                                                  615
                                                                                                                                   181
                                                                                                                                                                    201
                                                                                                                                                                                    735
                                                                                                                                                                                                     221
                                                                                                                                                                                                                     95
                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                      261
                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         381
                                                                  141
                                                                                                                                                                                                                                                     855
                                                                                                                                                                                                                                                                                      915
                                                                                                                                                                                                                                                                                                      281
                                                                                                                                                                                                                                                                                                                       954
                                                                                                                                                                                                                                                                                                                                                       999
                                                                                                                                                                                                                                                                                                                                                                       321
                                                                                                                                                                                                                                                                                                                                                                                        053
                                                                                                                                                                                                                                                                                                                                                                                                        341
                                                                                                                                                                                                                                                                                                                                                                                                                        1113
                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           233
                 43
                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 11
AF065163
LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
SOURCE
```

100

120

434

494

374

80

314

194

20

254

9

TITLE Kits, such as nucleic acid arrays, comprising a majority of humanexons or transcripts, for detecting expression and other uses thereof  JOURNAL Patent: WO 02068579-A 5142 06-SEP-2002; PE Corporation (NY) (US) FEATURES  12588 /organism="Homo sapiens" /mol_type="unassigned DNA" /db_xref="taxon:9606"	Alignment Scores:  Pred. No.: Score: Score: Percent Similarity: Best Local Similarity: 87.90% Mismatches: Conservative: Best Local Similarity: 85.18% Indels: DB:	US-09-939-483-5 (1-405) x CQ719208 (1-2588)  Qy	41 ArgGlnLeuGluLeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGluLeuGlu 60	Qy         81 PheTyrPheAlaileThrValileThrThrIleGlyTyrGlyHisAlaAlaAroSerThr 100           Db         371 TTCTACTTCGCCATCACCGTCATCACCACCACCAGGCACGGCACCCAGCACGCAGCACGCAGCA	Qy         121 MetPheGlnSerLeuGlyGluArgileAsnThrPheValArgTyrLeuLeuHisArgAla 140	Qy         161 PheValSerCysIleSerThrLeuCysIleGlyAlaAlaAlaAlaAlaAlaPheSerTyrTyrGluArg 180	201 ASPTYrValAlaLeuGlnLysAspGlnAlaLeuGlnThrGlnProGlnTyrValAlaPhe 22
Qy       121 MetPheGlnSerLeuGlyGluArgIleAsnThrPheValArgTyrLeuLeuHisArgAla       140         bb       495 ATGTTCCAGAGCCTGGGCGACCATCAACACTTGGTGAGGTACCTGCTGCACCGCGCC       554         Qy       141 LysArgGlyLeuGlyMetArgHisAlaGluValSerMetAlaAsnMetValLeuIleGly       160         bb       555 AAGAAGGGCTGGGCTGGCCCCGACGTGTCCATGGCTCATCGC       614         Qy       161 PheValSerCysIleSerThrLeuCysIleGlyAlaAlaAlaAlaAlaAlaAlaAlaAlaAlaAlaAlaAlaA	Qy         181 TrpThrPhePheGlnAlaTyrTyrTyrTyrCysPheIleThrLeuThrThrIleGlyPheGly         200           bb         675 TGGACCTTCTTCCAGGCCTACTACTACTTCATCACCCTCACCATCGGCTTCGGC         734           Qy         201 AspTyrValAlaLeuGlnLysAspGlnAlaLeuGlnThrGlnProGlnTyrValAlaPhe         220           Db         735 GACTACGTGCGCGCGCAGGCCCTGCAGACGCCCTGCAGACGCCGCAGTACGTGGCCTTC         794	YrlleLeuThrGlyLeuThrVall		999GGCGGCGCGCTTCCGCAACGTCTACGCGAGGTGCTGCACTTCCAGTCCATG  321 CysSerCysLeuTrpTyrLysSerArgGluLysLeuGlnTyrSerIleProMetIleIle  1053 TGCTCGTGCCTGTGGTACAAGAGCCGCGAGAAGCTGCAGTCCCATCCCATGATCATC  341 ProArgAspLeuSerThrSerAspThrCysValGluHisSerHisSerSerProGlyGly	GGGGGCCTCTCCACGTCCGACACGTGCGTGGAGCAGAGCCAGAGCCAGGGGGAGCAGAGCCAGGGGGGAGCAGAGCCAGGGGGG	33 GCCATCAGCTCGGTGTCCACGGTCTGCACCAGCCTGTCCACCTT 101 ArgArgSerServal 405 11	COT19208 LOCUS LOCUS LOCUS LOCUS CO719208 LOCUS CO719208 CO719208 CO719208 VERSION CO719208.1 GI:42280065 KEYWORDS SOURCE Homo sapiens CRGANISM HOMO SAPIE

d

Ø

<del>a</del>

ઠે

요

셤

õ

8

뭐

δ

d

ò

셤

δ

a

ठे

셤

ठे

```
AlavalGlyLeuGlyGlyLeuSerCysLeuSerGlySerLeuGlyAsp-
                                                                                                                                                                                             9 5
                                                                                                                                                                  8000444
                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                  (1-2574)
                                                                                                                                                                                                                                     $2
                                                                                                                                                                                                                                     AF242508
                                                                                                                                                                  3
                                                                                                                                                                4.83e-133
1642.50
91.39%
90.00%
78.03%
                                                                                                                                                                                                                                                                                                                                                                                                               AsnThrPhe
                                                                                                                                                                                                                                                       AsnLeuSerGluGly
                                                                                                                                                                                                                                      ×
                                                                                                                                                                                                                                                                                                         CAGCCCCAC
                                                                                                                                                                                                                                     (1-405)
                                                                                                                                                                                   Percent Similarity:
Best Local Similarity
Query Match:
                                                                                                                                                         Score
                                                                                                                                                                                                                                     US-09-939-483-5
                                                                                                                                                                                                                                                                                                                 520
                                                                                                                                                                                                                                                                                                                                                        550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     247
                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                           463
                                                                                                                                                                                                                                                                                               67
                                                                                                                                                                                                                                                                                                                                     87
                                                                                                                                                                                                                                                                                                                                                                                              610
                                                                                                                                                                                                                                                                                                                                                                                                                 127
                                                                                                                                                                                                                                                                                                                                                                                                                                   670
                                                                                                                                                                                                                                                                                                                                                                                                                                                     147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            267
                                                                                                                                                                                                                                                                                                                                                                          107
                                                                                                                                                                  No.:
                                                                                                                                                         Alignment
Pred. No.:
                                                                                                                                                                            Score
                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                   요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             원
                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        원
                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                     3-JUL-2000
con 2 and
                                                                                               1048
                                                                                                                                                                           1168
                                                                                                                                                                                                                 1228
                                                                                                                                     1108
                                                                                                                                                                                                                                                       1288
                                                                                                                                                                                             380
                   949
                                      300
                                                                           320
                                                                                                                 340
                                                                                                                                                         360
                                                                                                                                                                                                                                    400
                                                          994
                                                                                                                                                                                                                                                                                                                                                                                                                          leostomi;
inae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Congres
                                                                           .nSerMet
                                                                                                                                                                     GGGAGGG
                                                                                                                fet Lys
                                                                                                                                                        oglygly
                                                                                                                                                                                             CATGAAG
 SerLeu
                    -GGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the
                                      1GlyVal
                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (house mouse)
Mus musculus
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostc
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostc
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
Murinae;

(bases 1 to 2574)
Lopes, C.M., Gallagher, P.G., Buck, M.E., Butler, M.H. and
Goldstein, S.A.
Proton block and voltage gating are potassium-dependent in the
cardiac leak channel Kcnk3
J. Biol. Chem. 275 (22), 16969-16978 (2000)
                                                                                                                                                                                                                                                                                                                                     03-JU
exon
                                                                                                                                                                                                                                   ROD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29
                                     G|yAspValArgProArgAspProValThrCysAlaA|aA|aA|aA|aGlyGlyVa
                                                                                      --GGCGGCGGCGCTTCCGCAACGTCTACGCGGAGGTGCTGCACTTCCA
euThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuSerGl
                                                                                                                                                        ProArgAspLeuSerThrSerAspThrCysValGluHisSerHisSerSerPr
                                                                           GlyValGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGl
                                                                                                                                                                                                                                                                                                                                               gene,
                                                                                                                                                                   Yale University,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /map="B"
join(AF242508.1:<361. .1146,1. .>1512)
/gene="Kcnk3"
join(AF242508.1:<361. .643,566. .>1512)
/gene="Kcnk3"
/product="2 P domain potassium channel"
join(AF242508.1:361. .643,566. .1512)
                                                                                                                                                                                                                                                                                                                                    linear
(Kcnk3)
                                                      GGCAGCGCGCACACTACGGACACCGCCTCATCCACGGCGGCAGCG
                                                                                                                                                                                                                                                                                                                                              channel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 lu/town

2 (bases 1 to 25/4)

Goldstein, S.A.N.

Direct Submission

Submitted (06-MAR-2000) Pediatrics, Ya

Avenue, New Haven, CT 06536, USA

Location/Qualifiers
                  crcaceccaaceecaeeceeceeceeceecee
                                                                                                                                                                                                                                                                                                                                     2574 bp
domain potassium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'organism="Mus musculus"
'mol_type="genomic DNA"
'db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        chromosome="5
                                                                                                                                                                                                                                                                                               1303
                                                                                                                                                                                                                                                                                                                                                                          GI:8925318
                                                                                                                                                                                                                                                                           405
                                                                                                                                                                                                                                                                           rServal
                                                                                                                                                                                                                                                                                            1289 CGCAGGAGCTCCGTG
                                                                                                                                                                                                                                                                                                                                              Д
                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                             Mus musculus complete cds. AF241798 AF241798.1 G
                                                                                                                                                                                                                                                                                                                                     AF242508S2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10748056
                                                                                                                                                                                                                                                                                                                                                                                             o£
                                                                                                                                     1049
                                                                                                                                                                                                                                                       1229
                  911
                                                        950
                                                                           301
                                                                                                                                                                          1109
                                                                                                                                                                                                                 1169
                                                                                                                                                                                                                                   381
                                                                                                                                                                                                                                                                           401
                                     281
                                                                                                                 321
                                                                                                                                                         341
                                                                                                                                                                                              361
                                                                                               995
                                                                                                                                                                                                                                                                                                                  RESULT 13
AF242508S2
                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bourc
                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PUBMED
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA
                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
SEGMENT
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                     LOCUS
```

```
/codon_start=1
/product="2 P domain potassium channel"
/product="2 P domain potassium channel"
/protein_id="AAF81418.1"
/db_xref="GI:8925319"
/translation="MKRQNVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELR
QLELRARYNLSEGGYEELERVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPS
TDGGKVFCMFYALLGIPLTLVWFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANWV
LIGFVSCISTLCIGAAAFSYYERWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQP
QYVAFSFVYILTGLTVIGAFLNLVVLRFWTMNAEDEKRDAEHRALLTHNGQAVGLGGL
SCLSGSLGDGVRPRDPVTCAAAAGGVGVGVGSGFRNVYAEVLHFQSMCSCLWYKSRE
KLQYSIPMIIPRDLSTSDTCVEHSHSSPGGGRYSDTPSHPCLCSGTQRSAISSVSTG
LHSLAAFRGLMKRRSSV"
566. .>1512
/gene="Kcnk3"
/number=2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           146
                                                                                                                                                                                                                                                                                                                                                                                                                                                    609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    246
                                                                                                                                                                                                                                                                                                                                                       σ
                                                                                                                                                                                                                                                                                                                                                                                                     549
                                                                                                                                                                                                                                                                                                                                                                                                                             106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   285
                                                                                                                                                                                                                                                                                                                                                                              86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ---ValArgPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -GlyTyrGluGluLeuGluArgValValLeuArgLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LysAspGlnAlaLeuGlnThrGlnProGlnTyrValAlaPheSerPheValTyrIleLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   - - chicarccaricaran
                                                                                                                                                                                                                                                                                                                                                                              LysproHisLysAlaGlyValGlnTrpArgPheAlaGlySerPheTyrPheAlaIleThr
                                                                                                                                                                                                                                                                                                                                                                                            --AGCCTGTGCTTTCTCTCTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  574
```

· rge

.5

-483

Q

```
be preserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13455
13555
16198
16298
52991
53091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    * * * * *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Spirren, B., Linton, L., Nusbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barna, N., Bastien, V., Boguslavkiy, L., Boukhgalter, B., Brown, A., Camarata, J., Campopiano, A., Chang, J., Chazaro, B., Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Cook, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Faro, S., Farteira, P., FitzHugh, W., Gage, D., Galagan, J., Gardyna, S., Gord, S., Goyette, M., Graham, L., Grand-Pierre, N., Hagos, B., Heaford, A., Horton, L., Hulme, W., Illev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., LaRocque, K., Landers, T., Lehoczky, J., Levine, R., Liu, G., McCarthy, M., McEwan, P., Major, J., Marquis, N., Matthews, C., McCarthy, M., McEwan, P., McKernan, K., McPheeters, R., Maldrim, J., Meneus, L., Mihova, T., Mlenga, V., Murphy, T., Naylor, J., Nguyen, C., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Pollara, V., Raymond, C., Retta, R., Rieback, M., Riley, R., Rise, C., Rogov, P., Roman, J., Rosetti, M., Roy, A., Santos, R., Schauer, S., Schupback, R., Stange, Thomann, N., Stojanovic, N., Stauss, N., Subramanian, A., Travis, N., Travis, N., Travis, N., Ve, W.J., Young, G., Zainnoun, J., Zembek, L., Zimmer, A. and Zody, M.
                                                                                                                                       1269
                                                                                                                                                                                                           1329
                                                                                                                                                                                                                                                                                1389
                                                                                                                                                                                                                                                                                                                                                     1449
                                                                                                                                                                                                                                                                                                                                                                                                                        1509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-OCT-2002
                                    305
                                                                                                       325
                                                                                                                                                                          345
                                                                                                                                                                                                                                             365
                                                                                                                                                                                                                                                                                                                  382
                                                                                                                                                                                                                                                                                                                                                                                      405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            unordered
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 143074)
Birren, B., Nusbaum, C. and Lander, E.
Mus musculus, clone RP24-238P7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           for Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Birren, B., Nusbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barna, N., Bastien, V., Bloom, T., Boguslavkiy, L., Boukhgalter, B., Camarata, J., Chang, J., Chazaro, B., Choepel, Y., Collymore, A., Cook, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S.,
GCGTCCC
                                                           TGGCAGC
                                                                                                                                                                                         Glyser
                                                                                                     sLeuTrp
                                                                                                                                 CCTCTGG
                                                                                                                                                                         pLeuSer
                                                                                                                                                                                                                                           CTACAGC
                                                                                                                                                                                                                                                                                                                                                   creere
                                                                                                                                                                                                                                                                                                                                                                                   rSerVal
                                                                                                                                                                                                                                                                                                                  eSe
                                                                                                   HTG
                                GCTGTCGGCCTGGGCCTGAGCTGCCTGAGCGGTAGCCTGGGCGACGGCGT
                                                                                                                                                                          roArgAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear HT
DRAFT SEQUENCE,
                                                                                                                                                                                                                                                                                                                AspThrProSerHisProCysLeuCysSerGlyThrGlnArgSerAlall
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02141,
                                                                                                                                                                          roMetilelleP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lead Institute/MIT Cambridge, MA 0214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AC102222.3 GI:24182349
HTG; HTGS_PHASE1; HTGS_DRAFT; HTGS_FULLTOP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MORKING
                                                                                                                                                                        sLeuGlnTyrSerIleP
||||||||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Topham, K., Travers, M., Travis, N., III
Viel, R., Vo, A., Wilson, B., Wu, X., Wy
Zainoun, J., Zembek, L., Zimmer, A. and
Direct Submission
Submitted (23-NOV-2001) Whitehead II
Research, 320 Charles Street, Cambri
3 (bases 1 to 143074)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AC102222
Mus musculus clone RP24-238P7, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     to 143074)
                                                                                                                                                                        TyrLysSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished 2 (bases 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus
                                                                                                                                                                                                                                                                                                                                                                                                                     1450
                                                                                                                                                                                                                                                                              1330
                                                                                                                                                                                                                                                                                                                                                   1390
                                 286
                                                                  1150
                                                                                                                                      1210
                                                                                                                                                                                                           1270
                                                                                                     306
                                                                                                                                                                        326
                                                                                                                                                                                                                                              346
                                                                                                                                                                                                                                                                                                                  366
                                                                                                                                                                                                                                                                                                                                                                                    386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AC102222/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
d
                                ò
                                                                  d
d
                                                                                                                                     <del>Q</del>
                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                 요
                                                                                                     ð
                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                    8
```

```
Gardyna, S., Perreira, P., FitzGerald, M., Gage, D., Galagan, J.,
Gardyna, S., Octala, S., Graham, J., Grand-Perrea, N., Hafez, N.,
Kamai, A., Markara, C., Graham, J., Gand-Perrea, N., Hafez, N.,
Kamai, A., Markara, M., Raillan, M., Illan, J., Johnson, R.,
Kamai, A., Markara, M., Raillan, M., Meddin, J., Marbar, J.,
Mienga, V., Murdyn, T., Maylar, N., Meddin, J., Marbar, J.,
Reacton, C., Mordyn, M., Roman, J., Roy A., Schauer, S., Schhiptack, R.,
Schami, C., H., Sowan, J., Roy, A., Schauer, S., Schhiptack, R.,
Schami, J., Sevey, D., Boan, J., Roy, A., Schauer, S., Schhiptack, R.,
Schami, J., Wordline, D., Millan, P., O'Nebil, D., Oilver, J.,
Mienga, V., Murdyn, P., Boan, J., Roy, A., Schauer, S., Schhiptack, R.,
Schami, J., Wordline, J., Marker, M., Marker, M., And Zody, M.
Tittle Direct Shimision of Zainoun, J., Senek, L., Zimmer, A. and Zody, M.
Tittle Shimision, Control Street, Cambridge, NA Olth, USA
Marker, J., Wong, G., Zainoun, J., Senek, L., Zimmer, A. and Zody, M.
Tittle Shimision, Control Street, Cambridge, NA Olth, USA
Marker, J., 100 Charles Street, Cambridge, NA Olth, USA
Marker, J., 100 Charles Street, Cambridge, NA Olth, USA
Marker, J., 100 Charles Street, Cambridge, NA Olth, USA
Marker, J., 100 Charles Street, Cambridge, NA Olth, USA
Marker, J., 100 Charles Street, Cambridge, NA Olth, USA
Marker, J., 100 Charles Street, Cambridge, NA Olth, USA
Marker, J., 100 Charles Street, Cambridge, NA Olth, USA
Marker, J., 100 Charles Street, Cambridge, NA Olth, USA
Marker, J., 100 Charles Street, Cambridge, Na Olth, USA
Marker, J., 100 Charles Street, Cambridge, Na Olth, Olth,
```

S

Н

Page

S

```
S (bases I to 258789)

S Zhou, L., Fu, Y., Shi, R., Wu, J. and Roe, B.A.

Direct Submission

Submitted (29-DEC-2001) Department Of Chemistry And Biochemistry,

The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,

OK 73019, USA

3 (bases I to 258789)

S Zhou, L., Fu, Y., Shi, R., Wu, J. and Roe, B.A.

Direct Submission

S Shi, R., Wu, J. and Roe, B.A.

The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,

OK 73019, USA

4 (bases I to 258789)

S Zhou, L., Fu, Y., Shi, R., Wu, J. and Roe, B.A.

Direct Submission

L Submitted (01-SEP-2002) Department Of Chemistry And Biochemistry,

The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,

C Submitted (01-SEP-2002) Department Of Chemistry And Biochemistry,

The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,

OK 73019, USA

S Zhou, L., Fu, Y., Shi, R., Wu, J. and Roe, B.A.

Direct Submission

L Submitted (01-SEP-2002) Department Of Chemistry And Biochemistry,

The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,

OK 73010, L., Fu, Y., Shi, R., Wu, J., Shi, R., Wu, J
                                                                                                120509
                                                                                                                                                      120449
                                         120569
                                                                                                                                                                                                               -NOV-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (C57BL/6J) Mouse BAC Library"
                                                                                                                           405
                                                                     385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           And Biochemistry, Room 208, Norman,
                                                                                                                                                                                                                                                                                    Mus musculus (house mouse)
Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 258789)
Zhou, L., Fu, Y., Shi, R., Wu, J. and Roe, B.A.
Mus musculus BAC Clone rp23-224j9
Unpublished
              AspThrProSerHisProCysLeuCysSerGlyThrGlnArgSerAlaIleSerSerVal
                                                                                                                          ROD 16-
C57BL/6J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2002 this sequence version replaced gi:22597523
---- Genome Center
partment Of Chemistry And Biochemistry
                                                                                                                                                                                                               linear
strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chemistry Andron Oval,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           258789
324
                                                                                                                                                                                                               DNA
rp23-224j9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Shou, L., Fu, Y., Shi, R., Wu, J. and Roe, B.A. Shou, L., Fu, Y., Shi, R., Wu, J. and Roe, B.A. Direct Submission Submitted (16-NOV-2002) Department Of Chemi The University Of Oklahoma, 620 Parrington OK 73019, USA
On Nov 16, 2002 this sequence version repla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Female
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
                                                                                                                                                                                                       Mus musculus chromosome 5 clone racomplete sequence.
AC105298
AC105298.21 GI:25046377
HTG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Mus musculus"
/mol_type="genomic DNA"
/strain="C57BL/6J"
/db_xref="taxon:10090"
/chromosome="5"
/clone="rp23-224j9"
/clone_lib="RPCI - 23 Fen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
1. .258789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Center: Department Of Chem
The University Of Oklahoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.54e-130
1642.50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Center code: UOKNOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OK 73019, USA
5 (bases 1 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
Pred. No.:
                                                                                                                                                     120508
                                                                     366
                                                                                               120568
                                                                                                                           386
                                                                                                                                                                                             AC105298/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score:
                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                    ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                               셤
                                        셤
                                                                                                                           à
                                                                     8
                                                                                                                                                                                                                           121439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120749
                                                                                                                                                                                                                                                                                 121409
                                                                                                                                                                                                                                                                                                                                        121349
                                                                                                                                                                                                                                                                                                                                                                                               121289
                                                                                                                                                                                                                                                                                                                                                                                                                                                      121229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     226
                                                                                                                                                                                                                                                                                                                                                                                                                           146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             246
                                                                                                                                                                                                                                                                                                              106
                                                                                                                                                                                                                                                                                                                                                                     126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           285
                                                                                                                                                                                                99
                                                                                                                                                                                                                                                      86
                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              aleuGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCGTCCC
                                                                                                                                                                                                                                                                       -AGCCTGTGCTTTCTCTTCT
                                                                                                                                                                                                                                                                                                                                                                CGGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTCTGG
                                                                                                                                                                                                   uArgLeu
                                                                                                                                                                                                                           GCCAGAC
                                                                                                                                                                                                                                                                                                                                        GGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                       rileLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SLeuTrp
                                                                                                                                                                                                                                                                                                            sValPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nglygln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           lArgPro
                                                                                                                                                                                             AlavalGlyLeuGlyGlyLeuSerCysLeuSerGlySerLeuGlyAsp---va
                                                                                                                                                                                                                                                                                                          LysAspGlnAlaLeuGlnThrGlnProGlnTyrValAlaPheSerPheValTy
                                                                  143074
324
5
16
15
                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                    (1-143074)
             : right
                                                                                                                                                                    x AC102222
                                                                 7.35e-131
1642.50
91.39%
90.00%
clone_end:T
                                                                                                                                                                                            AsnLeuSerGluGly
                                                                                                                                                                  -483-5 (1-405)
                                                                            Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                               20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               326
                                                                                                                                                                                                                         21495
                                                                                                                                                                                                                                                                                                                                                                    107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               187
                                                                                                                                                                                                                                                                                 121438
                                                                                                                                                                                                                                                                                                                                                                                                                                                      288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120688
                                                                                                                                                                                                                                                                                                                                       121408
                                                                                                                                                                                                                                                                                                                                                                                               121348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121108
                                                       S
                                                                 . No. .
                                                                                                                                                                  US-09-939
                                                                   Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                      원
                                                                                                                                                                                                                                                                                                                                                                                              요
                                                                                                                                                                                                                                                                                                                                                                                                                                                      엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
```

us-09-939-483-5.rge

Percent Best Loc Query Ma	ent Similarity: Local Similari y Match:	arity: milarity:	91.39% 90.00% 78.03% 10	Conservative: Mismatches: Indels: Gaps:	5 16 15	
6-60-SN	939-483	-5 (1-405)	x AC105298	(1-258789)		
<b>상</b> 업	50		1y        GGGAGG	GlyTyrGluGluLer     :::  GGGGATGGGCAGAG	GlyTyrGluGluLeuGluArgValValLeuArgLeu	66
ò	<b>6</b> 7	LysProHisI :::	ıysAlaGlyV	lnTrpArgPheAlaGly	alGlnTrpArgPheAlaGlySerPheTyrPheAlaIleThr      :::	98
Ωρ	111215				- Accrereciticrererer	111186
à	ω		5.	lyHisAlaAlaProSer	yrGlyHisAlaAlaProSerThrAspGlyGlyLysValPhe	106
qq	111185		H.	grcardcddcdccccadc	cacedacedaceaacererro	111126
<i>장</i> 임	107		CysMetPheTyrAlaLeuLeuG                   GCATGTTCTACGCGCTGCTGG	lylleProLeuThrLeu 	euGlylleProLeuThrLeuIleMetPheGlnSerLeuGly                          GGGCATCCCGCTCACACTAGTCATGTTCCAGAGCCTGGGT	126 111066
à i	12		GluargileAsnThrPheVala	rgTyrLeuLeuHisArc	alArgTyrLeuLeuHisArgAlaLysArgGlyLeuGlyMet	
<b>a</b> n	90117		CAACACCTTCGTGA	GGTACCTGCTGCACCGT	I'GCCAAGAGGGGCTIGGGCATG	90071
& A	147		ArgHisAlaGluValSerMetA 	aasnmetValLeuIle 	etAlaAsnMetValLeuIleGlyPheValSerCysIleSer 	166 110946
ò	167	ThrieuCye	&- 4	JaPheserTyrTyrGlu	JArgTrpThrPhePheGlnAla	186
qa	110945		ACGCTGTGCATCGGCGCAGCTG	CCTTCTCCTACTACGAC		110886
ठे द	18		TyrTyrTyrCysPhelleThrL 	euThrThr11eGlyPhe	hrLeuThrIleGlyPheGlyAspTyrValAlaLeuGln	
2	CBBOTT		יופרו ורשורשרבר	יורארראורפפרווי	565564514161656565555555555555555555555	110020
දු පු	207		LysAspGlnAlaLeuGlnThrG 	lnProGlnTyrValAle	hrGlnProGlnTyrValAlaPheSerPheValTyrIleLeu 	226 110766
ò	227		ThrValileGlyA	laPheLeuAsnLeuVal	ValleuArgPheMetThrMet	246
qa	110765		ACGGCCTCACGGTCATCGGCG	CCTTCCTCAACCTCGTC	GCGCCTTCCTCAACCTCGTGGTGCTGCGATTCATGACCATG	110706
ò	247	AsnAlaGlu	AsnAlaGluAspGluLysArgA	ıspAlaGluHisArgAla 	rgAspAlaGluHisArgAlaLeuLeuThrHisAsnGlyGln	266
qq	110705		GGACGAGAGCGTC	ATGCGGAGCACCGCGCC	ccrecrcacecacaceccae	110646
6 6y	267		AlavalGlyLeuGlyGlyLeuS 	erCysLeuSerGlySer 	euSerCysLeuSerGlySerLeuGlyAspValArgPro	285
ò	28		yalThrCysAlaA	JaAlaAlaGlyGlyVal	lGlyvalGlyvalGlyGlyser	
дg	110585					110526
ò	306		GlyPheArgAsnValTyrAlaG	luValLeuHisPheGlr	laGluValLeuHisPheGlnSerMetCysSerCysLeuTrp	325
qa	110525		CAACGTCTATGCCC	AGGTGCTGCACTTCCAC	STCCATGTGCTCGTGCCTCTGG	110466
à	326		TyrLysSerArgGluLysLeuG		euGlnTyrSerIleProMetIleIleProArgAspLeuSer	
qq	110465		CCGCGAGAAGCTGC	AGTACTCCATCCCCATC	SATCATCCCGCGGGACCTCTCC	110406
<b>상</b> 입	346		ThrSerAspThrCysValGluH 	lisserHisserserPro	luHisSerHisSerSerProGlyGlyGlyGlyArgTyrSer 	365 110346
ò,	366		AspThrProSerHisProCysI	euCysSerGlyThrGlr	ysLeuCysSerGlyThrGlnArgSerAlaIleSerSerVal	385

110286	405	110226
GACACGCCCTCACACCCCTGCCTGTGCAGCGGACGCAGCGCTCGGCCATCAGCTCGGTG 110286	SerThrGlyLeuHisSerLeuAlaAlaPheArgGlyLeuMetLysArgArgSerSerVal 405	TCCACGGGCCTGCACAGCCTGCCTTCCGCGGCCTCATGAAGCGCAGGAGCTCGGTG
110345	386	110285
DÞ	ογ	qa

Search completed: September 16, 2005, 09:49:23 Job time : 5830 secs 1

```
GenCore version 5.1.6
(c) 1993 - 2005 Compugen Ltd.
                  Copyright
```

sw model using - protein search, OM protein

2005, 22:44:19 September 15, Run on:

.9; Search time 170 Seconds (without alignments) 1219.953 Million cell updates/sec

US-09-939-483-5 2105 1 ENVRTLALIVCTFTYLLVGA.....STGLHSLAAFRGLMKRRSSV Title: Perfect score: Sequence:

405

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

residues 1612378 seqs, 512079187 Searched:

1612378 Total number of hits satisfying chosen parameters:

Minimum DB Maximum DB

seq length: 0 seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

UniProt\_03:\*
1: uniprot\_sprot:\*
2: uniprot\_trembl:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

+[1000		0					
NO	ŗ	Match	Length	DB.	10	Description	Ę
	2 1			3			
-	2090.5	99.3	409	н	W3 MOUS	11	s musculu
~	065.	98.1	411	Н	CIW3_RAT	054912 rat	ttus norv
m	94	ς.	392	~	Q9ESM5	esm5	rattus norv
4	81	9	σ	-	CIW3_HUMAN	O14649 homo	no sapien
ស	φ.	2		~	Q9ESM4	ぜ	rattus norv
9	507.	٦.		~	Q9QX34	Q9qx34 mus	musc
7	12	m	~	7	063210	0	xenopus lae
80	10	ď	374	Н	CIW9 HUMAN	Q9npc2 homo	щ
σ	ς.	。	9	Ч	CIW9_CAVPO	8	avia porce
10	σ	7	σ	~	Q923 <u>V</u> 6	G	rattus norv
11	•	٠. ص	σ	~	Q9JLD4	4	rattus norv
12	0	ص	3	Ч	CIW9 RAT	90	rattus norv
13	86.	ď.	Н	Ч	CIWF_RAT	0	rattus norv
14	•	39.7	330	-	3	Q9h427 homo	no sapien
15	80	ъ В	2	~	017185		caenorhabdi
16	•	9	4	7	Q7QC61	_	
17	S	Ŋ.	4	N	Q9VHE0		drosophila
18	74	2		~	O7PZH9	σ.	anopheles g
19	•	4.	~	~	Q9JL57	_	via porce
20	26.	4	σ	7	Q9VFS9	D D	drosophila
21	Н	φ.	364	~	076790	_	aenorhabdi
22	O	٠ س		~	Q867A3	_	oryctolagus
23	36	7	405	-	CIWD MOUSE	Q8r1p5 mus	s musculu
24	64.	7	405	-	CIWD RAT	0	rattus norv
25	•	7.		Н	CIWD_HUMAN	Q9hb14 homo	sap
56	60.	7.	331	~	QBAVIS	15	xenopus lae
27	S	9		-	CIWG_HUMAN		no sapien
28	52.	9	'n	N	Q8BZB0	E	mus muscu
29	•	9	ú	~	Q8BUW1	E	mus muscu
30	52.	9	'n	<del></del> 1	IWA	P57789 homo	no sapien
31	52.	è.	m	-	CIWA RAT	Q9jis4 rat	tus

oryct	Q6x6z5 homo sapien P97438 mus musculu	rattu brach		ยกพ	Q6x6z3 homo sapien	bos t	homo	homo	O00180 homo sapien	Q9z2t2 rattus norv
Q6Q834 Q6B014	X 23	Q920 <u>B</u> 6 Q6PEI1	CIW4_HUMAN	O6P6P9	Q6X6Z3	Q8HY88	CIW2 HUMAN	Q9NRT2	CIW1 HUMAN	Q9Z2 <u>T</u> 2
0 0	7	0 0	н	~	7	7	Н	~	Н	7
538 543	294 411	426 323	σ	414	9	411	426	411	336	336
7	rv 4.					-		0	σ	σ
	16. 16.		9	9						
	348 345	44		4	•		'n	'n		34.
33	34 35	36 37	38	39	40	41	42	43	44	45

# ALIGNMENTS

```
its
  aboration
                                way
                                                                                                                                                                                                                                                                                                                                                                                                                    ü
                                        commercial
                                                  announce,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   303
            tstation
                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                         63
                     no su
                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                     AGGVG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGGVG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                            nt is in and for co
                                                                                                                                                                                                                                                 channel
This SWISS-PROT entry is copyright. It is produced through a coll between the Swiss Institute of Bioinformatics and the EMBL out the European Bioinformatics Institute. There are no restriction use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for c entities requires a license agreement (See http://www.isb-sib.ch/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGD-VRPRDPVTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIGAFI
                                                                                                                                                                                                                                                                                                                                           .
(Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                   1;
                                                                                                                                                                                                                                                                                                                                                                                                 409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            405
                                                                                                                                                                                                                                      Ionic channel; Potassium;
ane; Transport; Voltage-gated
Cytoplasmic (Potential).
Potential.
                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                           Pore-forming 1 (Potential).
Potential.
Cytoplasmic (Potential).
Potential.
Pore-forming 2 (Potential).
Potential.
Cytoplasmic (Potential).
N-linked (GlcNAc. . .) (Pote Q -> E (in Ref. 3).
V -> I (in Ref. 3).
                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCI
                                                                                                                                                                                                                                                                                                                                                                            CRC64;
                                                                                                                                                                                                                                                                                                                                                                                               Score 2090.5; DB 1;
Pred. No. 1.1e-153;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                            35236E011AAC5687
                                                                         EMBL; AB008537; BAA25436.1; -.
EMBL; AF241798; AAF81418.1; -.
EMBL; AF242508; AAF81418.1; JOINED.
EMBL; AF065162; AAG29339.1; -.
EMBL; AF066824; AAG53367.1; -.
EMBL; AB013345; BAA28349.1; -.
EMBL; AB013345; BAA28349.1; -.
InterPro; IPR005821; Ion trans.
InterPro; IPR005821; Ion trans.
InterPro; IPR001622; K+channel_pore.
InterPro; IPR003092; TASK_channel.
InterPro; IPR003092; TASK_channel.
Pfam; PF00520; Ion trans; 1.
PRINTS; PR01333; 2POREKCHANNEL.
PRINTS; PR01995; TASKICHANNEL.
PRINTS; PR01095; TASKICHANNEL.
Glycoprotein; Ion transmembrane; Transponts.
                                                                                                                                                                                                                                                                                                                                                                                                                  2;
                                                                                                                                                                                                                                                                                                                                                                            MM;
                                                                                                                                                                                                                                                                                                                                                                                              Match 99.3%;
Local Similarity 99.3%;
les 403; Conservative
                                                                                                                                                                                                                                                                                                                                                                            5068
                                                                                                                                                                                                                                                         ¥.
                                                                                                                                                                                                                                                         1 108
1129
1129
1224
1244
1234
1234
                                                                                                                                                                                                                                                Potassium
DOMAIN
                                                                                                                                                                                                                                                                                     TRANSMEM
DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               364
                                                                                                                                                                                                                                                                   TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         304
                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                        CONFLIC
                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                 Query Mat
                                                                                                                                                                                                                                                                                                                                                                                                         Best Loc
Matches
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ದ್ದ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ದ್ದ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                       TISSUE=28099797; PubMed=9437008;

MEDLINE=98099797; PubMed=9437008;

A Leonoudakis D., Gray A.T., Winegar B.D., Kindler C.H., Harada M.,

A Taylor D.M., Chavez R.A., Forsayeth J.R., Yost C.S.;

Toloned from rat cerebellum.";

J. Neurosci. 18:868-877(1998).

J. Neurosci. 18:868-877(1998).

C -!- FUNCTION: pH-dependent, voltage-insensitive, background potassium channel protein. Rectification direction results from potassium ion concentration on either side of the membrane. Acts as an outward rectifier when external potassium concentration is low.

When external potassium concentration is high, current is inward (By similarity).

-!- SUBCELLULAR LOCATION: Integral membrane protein (Potential).
                                                           16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 44, Last annotation update)
05-JUL-2004 (Rel. 44, Last annotation update)
Potassium channel subfamily K member 3 (Acid-sensitive potassium channel TASK-1) (TWIK-related acid-sensitive K+ channel 1)
(Two pore potassium channel KT3.1).
Name=Kcnk3; Synonyms=Task, Task1;
Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        channel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             zinc,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         expression in lung and brain. Low levels in liver, kidney and skeletal muscle.
MISCELLANEOUS: Inhibited by extracellular acidification, zing bupivacaine and phenytoin. Activated by protein kinase A. SIMILARITY: Belongs to the two pore domain potassium channel (TC 1.A.1.8) family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .
(Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE SPECIFICITY: Strongest expression in heart. Moderate expression in lung and brain. Low levels in liver, kidney as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pore-forming 1 (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        . .) (Pc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cytoplasmic (Potential)
N-linked (GlcNAc. ..)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cytoplasmic (Potential)
Potential.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linked (GlcNAc. D2778016E09E2BF5
                                411 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pore-forming
Potential.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ion_trans.
K+channel_2pore.
K+channel_pore.
TASK1_channel.
TASK_channel.
                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; AF031384; AAC39952.1; -. RGD; 61997; Kcnk3.
InterPro; IPR005821; Ion trans.
InterPro; IPR001622; K+channel_p InterPro; IPR001622; K+channel_p InterPro; IPR001622; K+channel_p InterPro; IPR003092; TASK1_channelfam; PF00520; Ion trans; 1. PRINTS; PR01333; 2POREKCHANEL. PRINTS; PR01095; TASK1CHANNEL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
29
29
101
8 128
9 158
179
207
243
411
53 N
45276 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ion transport
                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Potassium channel;
DOMAIN 1
                                                                                                                                                                                                                                                              EQUENCE FROM N.A
                                                                                                                                                                                                                              NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                78
108
129
159
184
223
244
53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Glycoprotein;
                                CIW3 RAT
054912;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
RESULT
            CIW3
                                                                                                             DE
DE
DE
```

Length 411;

1;

DB

2065.5;

Score

Query Match

· rup

S

n

-48

σ m σ

σ 0

200

240

224

297

Ġ

284

357

392

40

104

44

180

164

```
WTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIGAFLNLVV
                                                                                                                                                                MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
             ENVRTLALIVCTFTYLLVGAAVPDALESEPEMIERQRLELRQLELRARYNLSEGGYEELE
                                  -ELROLELRARYNLSEGGYEELE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
TISSUE=Kidney;
MEDLINE=97459932; PubMed=9312005; DOI=10.1093/emboj/16.17.5464;
MEDLINE=97459932; PubMed=9312005; DOI=10.1093/emboj/16.17.5464;
Duprat F., Lesage F., Fink M., Reyes R., Heurteaux C., Lazdunski M.;
"TASK, a human background K+ channel to sense external pH variations near physiological pH.";
EMBO J. 16:5464-5471(1997).
                                                                                                                                                                                                    LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGD-VRPRDPVTCAAAAG
                                                                                                                                                                                                                                                                                                                                                                                          16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Potassium channel subfamily K member 3 (Acid-sensitive potassium channel protein TASK-1) (TWIK-related acid-sensitive K+ channel 1 (Two pore potassium channel KT3.1).
Name=KCNK3; Synonyms=TASK, TASK1;
Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               channel family.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTIVATION.
MEDLINE=99254548; PubMed=10321245; DOI=10.1038/8084;
Patel A.J., Honore E., Lesage F., Fink M., Romey G., Lazdunski "Inhalational anesthetics activate two-pore-domain background Ichannels.";
                                                                                                                                                                                                                                                                                               potassium-dependent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lopes C.M.B., Gallagher P.G., Buck M.E., Butler M.H., Goldstein S.A.N.; "Proton block and voltage-gating are potassium-dependent cardiac leak channel Kcnk3."; Submitted (MAY-1998) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MUTAGENESIS OF HIS-98.
MEDLINE=21535313; PubMed=11680614;
Ashmole I., Goodwin P.A., Stanfield P.R.;
"TASK-5, a novel member of the tandem pore K+
                                    -LES
                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . Neurosci. 2:422-426(1999)
                                  ONVRTLALIVCTFTYL
                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM TISSUE=Heart;
                                                                                                                                                                                                                                                                                                                                                                                  CIW3 HUMAN
014649;
                                                                                                         121
                                                                                                                                                                                                                                                   298
                                                                                                                                                                                                                                                                                                                        345
                                                                                  45
                                                                                                                                                      181
                                                                                                                                                                             165
                                                                                                                                                                                                     241
                                                                                                                                                                                                                           225
                                                                                                                                                                                                                                                                         285
                                     4
                                                            61
                                                                                                                                105
                                                                                                                                                                                                                                                                                                 358
                                                                                                                                                                                                                                                                                                                                                                      HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                    CIW3_
                                                                                                                                                                                                                                                                                                                                                                                             AC
DT
DT
                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                 셤
                                                                                                                               ದ್ದ
                                                                                                                                                                             g
                                                                                                                                                                                                                           엄
                                                                                                                                                                                                                                                                         셤
                                                            ò
                                                                                                         ઠે
                                                                                                                                                      ठ
                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4.
                                                                                 120
             2
                                                                                                        123
                                                                                                                                180
                                                                                                                                                      183
                                                                                                                                                                                                    243
                                                                                                                                                                                                                           297
                                                                                                                                                                                                                                                  303
                                                                                                                                                                                                                                                                         357
                                                                                                                                                                                                                                                                                                 363
                                                          63
                                 PLTLI
                                                                                                      PLTLV
                                                                                                                              SYYER
                                                                                                                                           VGVGVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEHSHSS
                                                                                                                                                                                                                           LRFWTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGD-VRPRDPVTCAAAAG--G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ttus
                                                                                Rattus norvegicus (Rat).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Rat
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  channel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22;
              ന
                                                                                                                                                                                                                                                                                                                       405
                                                                                                                                                                                                                                                                                                                                                411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          392
                                                                                                                                                                                                                                                                                                                       Ohya S., Kitsukawa M., Imaizumi Y.;
Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: Belongs to the two pore domain potassium
(TC 1.A.1.8) family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                        MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Transmembrane; Transport F5438B12AAD7FB1B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (TC 1.A.1.8) family.

EMBL; AB048823; BAB16710.1; -.

GO; GO:0016021; C:integral to membrane; IEA.

GO; GO:0005216; F:ion channel activity; IEA.

GO; GO:0006811; P:ion transport; IEA.

GO; GO:0006811; P:ion transport; IEA.

GO; GO:0006811; P:ion transport; IEA.

InterPro; IPR005821; Ion trans.

InterPro; IPR003280; K+channel_2pore.

InterPro; IPR001622; K+channel_pore.

InterPro; IPR001622; K+channel_nore.

InterPro; IPR003092; TASKI_channel.

Pfam; PF00520; Ion_trans; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                          or-war-zour (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update
TASK1 splice bvariant (TASK1b).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 1944; DB 2;
Pred. No. 2.3e-142;
); Mismatches 2;
 Pred. No. 9.4e-152; Mismatches 2
                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3;
            3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 POREKCHANEL.
TASK1 CHANNEL.
TASKCHANNEL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 43150 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       channel
11 Similarity 98.0%; 400; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        92.4%;
larity 93.4%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ionic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRINTS; PR01333;
PRINTS; PR01584;
PRINTS; PR01095;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ion transport;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM TISSUE-Brain
                                                                                                                                                                                                                                                                                                                                                                                                      Q9ESM5
Q9ESM5;
01-MAR-2001
01-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               381;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 381
                                                                                                                                                                                                                                                                                                                                              364
                                                                                                        64
                                                                                                                                                     124
                                    Н
                                                                                  61
                                                          4
                                                                                                                                                                             181
                                                                                                                                                                                                   184
                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                  244
                                                                                                                                                                                                                                                                         298
                                                                                                                                                                                                                                                                                                304
                                                                                                                                                                                                                                                                                                                       358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                              121
  Local
            hea
 Best
Matcl
                                                                                                                                                                                                                                                                                                                                                                                  SULT
                                                                                                                                                                                                                                                                                                                                                                                              ESMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <del>a</del>
                                                                                                        a
a
                                                                                                                                                     d
                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                70
70
70
                                                                                 õ
                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                               ਠੇ
                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                         ठे
                                                                                                                                                                                                                                                                                                                       ð
```

Ξ.

the

in

```
405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ionic channel.
SEQUENCE 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   >
       184
                                                    244
                                                                                                                         361
                                                                                                                                                 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                              241
                                                                            301
                                                                                                   292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                   SULT
                                                                                                                                                                                             Q9ESM4
                                                                                                                                                                                                                   d
                                                                                                  점
                             ð
                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                            ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                   in no way
commercial
                                                                                                                                                                                                        its
                                                                                                                                                                                laboration
                                                                                                                                                                                                                                           announce/
Pflugers Arch. 442:828-833(2001).

-!- FUNCTION: pH-dependent, voltage-insensitive, background potassium channel protein. Rectification direction results from potassium ion concentration on either side of the membrane. Acts as an outward rectifier when external potassium concentration is low.

When external potassium concentration is high, current is inward.

When external potassium concentration is high, current is inward.

-!- SUBCELLULAR LOCATION: Integral membrane protein (Potential).

-!- TISSUE SPECIFICITY: Widespread expression in adult. Strongest expression in pancreas and placenta. Lower expression in brain, lung, prostate, heart, kidney, uterus, small intestine and colon.

-!- MISCELLANEOUS: Inhibited by external acidification. Activated by halothane and isoflurane.

-!- SIMILARITY: Belongs to the two pore domain potassium channel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        183
                                                                                                                                                                                              outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YEELE
                                                                                                                                                                                                          no su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGIPLTLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIGAFLNLVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ONVRTLALIVCTFTYLLVGAAVFDALESEPELIERORLELRORELRARYNLSQGGYEELE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PLTLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a coll between the Swiss Institute of Bioinformatics and the EMBL out the European Bioinformatics Institute. There are no restriction use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for c entities requires a license agreement (See http://www.isb-sib.ch/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Potential.
Cytoplasmic (Potential).
N-linked (GlcNAc. . .) (Potential).
H->N: Greatly reduces pH sensitivity
9FF4C8266F615FB7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ESEPEMIERORLELROLELRARYNLSEGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 394;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pore-forming 2 (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pore-forming 1 (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cytoplasmic (Potential)
Potential.
                                                                                                                                                                                                                                                                                                                     GO:0005887; C:integral to plasma membrane; TAS. GO:0005267; F:potassium channel activity; TAS. GO:0006813; P:potassium ion transport; TAS. GO:0007268; P:synaptic transmission; TAS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
..le-132;
les 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ed. No. 1.16
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 1819;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Potential
                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR005821; Ion trans.
InterPro; IPR003280; K+channel_2pore.
InterPro; IPR001622; K+channel_pore.
InterPro; IPR005406; TASK1_channel.
InterPro; IPR003092; TASK_channel.
Pfam; PF00520; Ion_trans; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENVRTLALIVCTFTYLLVGAAVFDAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred
                                                                                                                                                                                                                                                                       EMBL; AF006823; AAC51777.1; -. EMBL; AF065163; AAG29340.1; -. Genew; HGNC:6278; KCNK3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9.
                                                                                                                                                                                                                                                                                                                                                                                                                            PR01333; 2POREKCHANEL.
PR01584; TASKICHANNEL.
PR01095; TASKCHANNEL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ein; Ion transport;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       86.4%;
ilarity 88.1%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  43518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20
1001
1128
1128
1179
2243
3344
534
534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       channel;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ą.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  l Similarity
357; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      108
108
1129
1129
1223
244
244
394
1
                                                                                                                                                                                                                                                                                                             603220;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Potassium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Glycoprot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS;
PRINTS;
PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                              Genew;
MIM; 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                       8888
                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      а
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
```

```
300
                                                                                                   360
                                                                                                                                     349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                 WTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIGAFLNLVV
                                LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGVGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LCIGAAAFSYYERWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GLTVIGAFLNLVVLRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGD-VRPR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                 -GGSAHTTDTASSTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                               Euteleostomi; Murinae; Ra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3,
                                                                                                                                                                       405
                                                                                                                                                                                                        394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                       Q9ESM4

Q9ESM4;

Q9ESM4;

Q1-MAR-2001 (TrEMBLrel. 16, Created)

O1-MAR-2003 (TrEMBLrel. 16, Last sequence update)

O1-JUN-2003 (TrEMBLrel. 24, Last annotation update)

TWIK-related acid-sensitive K+ channel sprice variant (7)

Rattus norvegicus (Rat).

Rattus norvegicus (Rat).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eute
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      databases
                                                                                                                                                                   265DE38DFA79595E CRC64;
                                                                                                                                                                                                                                                                                                                                          , Last sequence update)
, Last annotation update)
e K+ channel sprice variant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 1519.5; DB 2;
Pred. No. 1.4e-109;
2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.

TISSUE=Aotra;
Ohya S., Kitsukawa M., Imaizumi Y.;
Submitted (SEP-2000) to the EMBL/GenBank/DDBJ dat.
EMBL; AB048824; BAB16711.1; -.
GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0005216; F:ion channel activity; IEA.
GO; GO:0006813; P:potassium channel activity; IEA.
GO; GO:0006813; P:potassium ion transport; IEA.
InterPro; IPR001622; K+channel_pore.
InterPro; IPR003092; TASKI channel.
PRINTS; PR01584; TASKICHANNEL.
PRINTS; PR01095; TASKCHANNEL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IEA
                                                   5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             32811 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 97.7%;
Matches 294; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301 AA;
```

· rup

် က

-483

939

S 0

118

```
SEQUENCE FROM TISSUE=Eye;
                                                                                                   Dev. Dyn.
                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                    64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 184
                                                                                                                                                                                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  124
                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                                                                                                                                Best
ò
                                                                                                                                                                                                                                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                           PLTLV
                                                                                                                                                                                                                                                                                                                                                                                                             SYYER
                                                                                                                                                                                                                                                                                                                                                                               PLTLI
                                                                                                                                                                                                                                                                                                                                                                                                                         SYYER
                                                                                                                                                                                                                                                                                                                                               ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGGYEELE
                                                                                                                                                                                                                                                                                                                                                                                                                                           295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          297
                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ·- 03
                                                                                                                                                                                                                                                                                                                                                                              Euteleostomi
                                                                                                                                                                                                                                                                                                                                                                                                              MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAF
                                                                                                                                                                                                                                                                                                                                                                                                                       Murinae; Mu
                                                                                                                                                         channel
                                                                                                                                                                                                                                                                                                                  299
                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                             Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: Belongs to the two pore domain potassium (TC 1.A.1.8) family.
EMBL; AF022821; AAD09338.1; -.
MGD; MGI:1100509; Kcnk3.
GO; GO:0005615; C:extracellular space; TAS.
GO; GO:0016021; C:integral to membrane; TAS.
InterPro; IPR005821; Ion trans.
InterPro; IPR003280; K+channel_2pore.
                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                           Transport
                                                                                                                                                                                                                                                                                                  DCD41D8A212939C4 CRC64;
                                                                                                                                 H
                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; NCBI_TaxID=10090;
                                                                                                                                 L.-Y., Hughes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                 DB 2;
                                            Created)
Last sequence update)
Last annotation update
DP4 (Fragment).
                                                                                                                                                                                                                                                                                                                Score 1507.5; DB 2
Pred. No. 1.1e-108;
; Mismatches 0;
                                                                                                                                                                                                                                                                           Transmembrane;
                                                                                                                                                                                                               InterPro; IPR003280; K+channel_Zpore.
InterPro; IPR001622; K+channel_pore.
InterPro; IPR005406; TASK1_channel.
InterPro; IPR003092; TASK_channel.
Pfam; PF00520; Ion_trans; 1.
PRINTS; PR01333; 2POREKCHANEL.
PRINTS; PR01584; TASK1CHANNEL.
PRINTS; PR01095; TASKCHANNEL.
                                                                                                                                 Quinn A.M., Wang
                                                                                                                                                                                                                                                                                                                                ۲;
                                                                   Putative potassium channel DP4
Name=Kcnk3;
                                                                                                                                                                                                                                                                                         299
33325 MW;
                                                                                                                                                                                                                                                                            Ionic channel;
                                                                                                                                                                                                                                                                                                                 71.6%;
ilarity 99.3%;
Conservative
                                            . 13,
. 13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28,
28,
28,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (TrEMBLrel.
(TrEMBLrel.
(TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY
                               PRELIMINARY
                                           (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                Gan L., Joiner ....,
Kaczmarek L.K.;
Submitted (SEP-1997) t
-!- SIMILARITY: Belong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q63ZIO PRELIMINAF
Q63ZIO;
25-OCT-2004 (TrEMBLre]
25-OCT-2004 (TrEMBLre]
25-OCT-2004 (TrEMBLre]
Hypothetical protein.
                                                                                    (Mouse)
                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                         l Similarity
294; Conser
                                                                                                                          SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                          299 7
                                                                                                                                                                                                                                                                           Ion transport;
NON TER
                                                                                    musculus
                                   090X34;
01-MAY-2000
01-MAY-2000
01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          242
                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                           182
                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                               62
                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                2
                                                                                                                                                                                                                                                                                                                                                                                                                             122
                                                                                                                                                                                                                                                                                                 SEOUENCE
                                                                                                                                                                                                                                                                                                                   Match
                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                         Best Loc
Matches
                                                                                                                                                                                                                                                                                    NON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
               RESULT
                     Q9QX34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q63Z10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ΩI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AC
DT
DT
DE
                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           d
                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                             ਠੋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                              8
```

```
120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       356
                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE=EPS:

TISSUE=EPS:

PubMed=12477932; DOI=10.1073/pnas.242603899;

Rtrausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Rtausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Rosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Rahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

Whiting M., Madan J.W., Green E.D., Dickson M.C.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,

Jones S.J., Marra M.A.;

"Generation and initial analysis of more than 15,000 full-length human mand initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGGYEELE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGIPLTLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LVIMOSEPHRAGVOWKFAGSFYFAITVITTIGYGHAAPGTDAGKAFCMFYAVLGIPLTLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MFOSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WIFFQAYYYCFITLTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIGAFLNLVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGVGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEHSHS
                                                                                                                                                                                                                                                                                        The NIH Xenopus
                              Euteleostomi; Pipidae;
                                                                                                                                                                                                                                      S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               50,
                                                                                                                                                                              TISSUE=Eye;
MEDLINE=22341132; PubMed=12454917; DOI=10.1002/dvdy.10174;
Klein S.L., Strausberg R.L., Wagner L., Pontius J., Clifton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 374;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    --IIHIQEDTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CRC64;
                             Vertebrata; E
.a; Pipoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequences.";
id. Sci. U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                                      Richardson P.;
"Genetic and genomic tools for Xenopus research:
initiative.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 1123; DB 2;
Pred. No. 9.2e-79;
5; Mismatches 79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8F37D8FF1F689F63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the EMBL/GenBank/DDBJ
Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Ver
Amphibia; Batrachia; Anura; Mesobatrachia;
Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |||:|||:|||:|||:|||| | ::
LRFLTMNSEDERRDAEERASLAGNRNSM-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         42718 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        53.3%; Enlarity 55.4%; EConservative 55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Klein S., Gerhard D.S.;
Submitted (SEP-2004) to the
EMBL; BC082937; AAH82937.1;
Hypothetical protein.
SEQUENCE 374 AA; 42718 M
                                                                                                                                                                                                                                                                                                                                           225:384-391 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
tes 229; Conser
                                                                                                                                                                                                                                                                                                                                                                                             FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FROM N.A
                                                                                                                                                              FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Acad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDNA
```

3

:: :: ::

```
CAVPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CIMB_(
 DARAGO DARAMANA DARAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OS OE OF OS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      in no way
commercial
h/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             laboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL outstation
  SISYK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PMA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE five.

TISSUE=Cerebellum;

PubMed=11042359; DOI=10.1016/S0169-328X(00)00183-2;

PubMed=11042359; DOI=10.1016/S0169-328X(00)00183-2;

Chapman C.G., Meadows H.J., Godden R.J., Campbell D.A., Duckworth M. Kelsell R.E., Murdock P.R., Randall A.D., Rennie G.I., Gloger I.S.;

Kelsell R.E., Murdock P.R., Randall A.D., Rennie G.I., Gloger I.S.;

"Cloning, localisation and functional expression of a novel human,

"Cloning, localisation and functional expression of a novel human,

cerebellum specific, two pore domain potassium channel.";

Rrain Res. Mol. Brain Res. 82:74-83(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=20287530; PubMed=10747866; DOI=10.1074/jbc.M000030200; Rajan S., Wischmeyer E., Liu G.X., Preisig-Mueller R., Daut J., Karschin A., Derst C.; "TASK-3, a novel tandem pore domain acid-sensitive K+ channel. Ar
                                                                                                                                                                                                                               16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Potassium channel subfamily K member 9 (Acid-sensitive potassium channel protein TASK-3) (TWIK-related acid-sensitive K+ channel Name=KCNK9; Synonyms=TASK1.2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a coll between the Swiss Institute of Bioinformatics and the EMBL out the European Bioinformatics Institute. There are no restriction use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for entities requires a license agreement (See http://www.isb-sib.ch/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Also four
                                                  4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Neurophysiol. 86:130-142(2001).

Neurophysiol. 86:130-142(2001).

FUNCTION: pH-dependent, voltage-insensitive, background potage channel protein.

SUBCELLULAR LOCATION: Integral membrane protein (Potential).

TISSUE SPECIFICITY: Mainly found in the cerebellum. Also foun adrenal gland, kidney and lung.

MISCELLANEOUS: Inhibited by phorbol 12-myristate 13-acetate Insensitive to changes in the pH range of 7-8.

Insensitive to changes in the pH range of 7-8.

(TC 1.A.1.8) family.
--HGRQRYKAEVTDLQSVCSCMCYRSHE---YTSRMVSHQNSFSSKLNPQYFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       closely
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Euteleostomi
                                              ----SPGGGGRYSDTPSHPCLCSGTQRSAISSVSTGLHSLAAFRGLMKRRSSV
                                                                                                 -TLKNSLFPSPVSSVSPGLHSFTDKHRLMKRKKSI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       channels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pountney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
Girard C., Lesage F., Tinel N., Lazdunski M.;
"Human Task-3, a novel 2P domain potassium channel rela:
Submitted (JUN-2000) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, F
Mammalia, Eutheria, Primates, Catarrhini, Hominidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
MEDLINE=21324619; PubMed=11431495;
Vega-Saenz de Miera E., Lau D.H.P., Zhadina M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Coetzee W.A., Rudy B.; "KT3.2 and KT3.3, two novel human two-pore K(+) related to TASK-1.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "TASK-3, a novel tandem pore ucurations extracellular histidine as pH sensor."; J. Biol. Chem. 275:16650-16657(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AF212829; AAF63708.1; -. AF248241; AAG31730.1; -. AF279809; AAF85982.1; -.
                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FROM N.A
                                                                                                  IEEISPS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                        CIW9 HUMAN
Q9NPC2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
TISSUE=Ce
                                                                                                  334
                                                 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL;
EMBL;
EMBL;
                                                                                                                                                                             SULT
                                                                                                                                                                                                                                                                                                                                                g
                                                 8
```

```
ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGVGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        --RYKADVPDLQSVCSCTCYRSQD---YGGRSVAPQNSFSAKLAPHYFHSISYK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGGYEELE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEHSHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Potassium channel subfamily K member 9 (Acid-sensitive potassium channel protein TASK-3) (TWIK-related acid-sensitive K+ channel Name=KCNK9; Synonyms=TASK3; Cavia porcellus (Guinea pia).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cytoplasmic (Potential).
N-linked (GlcNAc. . .) (Potential)
8A19EAEE5A4D7F38 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             --SPGGGGRYSDTPSHPCLCSGTQRSAISSVSTGLHSLAAFRGLMKRRSSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 - TLKNSLFPSPISSISPGLHSFTDHQRLMKRRKSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Jated
                                                                                         MIN; 0026/4; C: membrane fraction; NAS.

GO; GO: 0005664; F: potassium channel activity; NAS.

GO; GO: 0005267; F: potassium con transport; NAS.

InterPro; IPR005821; Ion_trans.

InterPro; IPR005821; Ion_trans.

InterPro; IPR00580; K+channel_pore.

InterPro; IPR005407; TASK_channel.

InterPro; IPR005407; TASK_channel.

InterPro; IPR005407; TASK_channel.

PRINTS; PR01333; 2POREKCHANEL.

PRINTS; PR01333; 2POREKCHANEL.

PRINTS; PR01333; 2POREKCHANEL.

PRINTS; PR01095; TASKGHANNEL.

PROMAIN 1 PR PR01095; TASKGHANNEL.

PROMAIN 200 Potential.

TRANSMEM 159 179 Potential.

TRANSMEM 150 TOTO P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -SMVIHIPEEPRPSRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 86; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 1100; DB 1;
Pred. No. 5.6e-77;
8; Mismatches 86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     52.3%;
illarity 55.4%;
Conservative 4
EMBL; AF257080; AAG33126.1;
Genew; HGNC:6283; KCNK9.
MIM; 605874; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
hes 229; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IEEISPS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CIW9 CAVPO
Q9JL58;
16-OCT-2001
16-OCT-2001
05-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               357
```

rup

Ŋ

```
FROM N.A.
                                                                                                                                                                            Potassium channel
                                                                                                                                                                                                                                                             STRAIN=Wistar;
MEDLINE=21864514;
                                 GEGGD-
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ion transport
SEQUENCE 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SLGD
                                                                                                                                  0923V6;
01-DEC-2001
01-DEC-2001
01-JUN-2003
                                                                                                                                                                                       Name=Kcnk9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       64
                                288
                                                                       310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                244
                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         304
                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                       10
                                                                                                       RESULT
Q923V6
                                                                                                                                               엄
                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       පු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                     ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ਠੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                       laboration
                                                                                                                                                                                                                      n no way
commercial
                                                                                                                                                                                                                                        /announce,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PLTLV
                                                                                                                                                                                                           There are no restrictions on 
19 as its content is in no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YEELE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LINEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WIFFQAYYYCFITLTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIGAFLNLVV
                                                                                                                          asium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PLTLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGVGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                       6]
                                                                                                                                                                                                                   use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for entities requires a license agreement (See http://www.isb-sib.ch.or send an email to license@isb-sib.ch).
                                                                                                                                             membrane protein (Potential).
pore domain potassium channel
                                                                                                                                                                                       COJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Euteleostomi
                                                                                                                                                                                                                                                                                                                                                                                        chann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cytoplasmic (Potential).
N-linked (GlcNAc. . .) (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               65;
                                                                                                                                                                                       jhac
EMBL
                                                           MEDLINE=20287530; PubMed=10747866; DOI=10.1074/jbc.M000030200; Rajan S., Wischmeyer E., Liu G.X., Preisig-Mueller R., Daut J. Karschin A., Derst C.; "TASK-3, a novel tandem pore domain acid-sensitive K+ channel.extracellular histidine as pH sensor."; J. Biol. Chem. 275:16650-16657(2000).

-!- FUNCTION: pH-dependent, voltage-insensitive, background pc channel protein.

-!- SUBCELLULAR LOCATION: Integral membrane protein (Potential-1-SUBCELLULAR LOCATION: Integral membrane protein (Fotential-1-SIMILARITY: Belongs to the two pore domain potassium channel TC 1.A.1.8) family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          365
                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Enthe European Bioinformatics Institute. There are no restr
                                                                                                                                                                                                                                                                                                                                                                           Ionic channel; Potassium;
ane; Transport; Voltage-gated
Cytoplasmic (Potential).
Potential.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        --VTHISEEARQVRORYR-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
 Chordata; Craniata; Vertebrata; Eute
Rodentia; Hystricognathi; Caviidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                      (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1111K6d (GICNAC. . .) (F
261DC973FF53AF91 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Cytoplasmic (Potential)
Potential.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 1062.5; DB 1;
Pred. No. 4.4e-74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ~
                                                                                                                                                                                                                                                                                                                                                                                                                      Pore-forming 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Potential.
Pore-forming
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Potential
                                                                                                                                                                                                                                                                                                                                                                                                                              Potential
                                                                                                                                                                                                                                                                                InterPro; IPR005821; Ion trans.
InterPro; IPR003280; K+channel_2pore.
InterPro; IPR001622; K+channel_pore.
InterPro; IPR005407; TASK3_channel.
InterPro; IPR003092; TASK_channel.
                                                                                                                                                                                                                                                                                                                                                                                        Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               44;
                                                                                                                                                                                                                                                                                                                                    Ion trans; 1.
                                                                                                                                                                                                                                                                                                                                                        ; TASK3CHANNEL.; TASKCHANNEL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40769 MW;
                                                                                                                                                                                                                                                                                                                                                                            Glycoprotein; Ion transport;
Potassium channel; Transmemb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         50.5%;
ilarity 53.8%;
Conservative 4
                                                                                                                                                                                                                                                                      ; AAF63706.1
                                                                                                                                                                                                                                                                                                                                                                                                 29
101
101
1128
1128
1179
207
239
365
53
Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                        SEQUENCE FROM N.A.
TISSUE=Brain;
MEDLINE=20287530;
                                                                                                                                                                                                                                                                                                                                            PR01333;
PR01585;
PR01095;
                                                                                                                                                                                                                                                                                                                                                                                                                    78
108
129
159
184
219
240
53
                                                                                                                                                                                                                                                                       EMBL; AF212827
                                                                                                                                                                                                                                                                                                                                    PF00520;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              224;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                           TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                              TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                    TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                  Pfam; PF
PRINTS;
PRINTS;
PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Loc
Matches
                                        <del>a</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ठ
```

```
120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       349
 360
                                     309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEHSHSSPGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   --VRPRDPVTCAAAAGGVGVGVGGGSGFRNVYAEVLHFQSMCSCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        --SG
                                                                        405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Adrenal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGIPLTLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ||||:||| ::: : | :| | : | :
LRFLTMNTDEDLLEGEVAQILAGNPRRVVVRVPQSRKRHHPMYFLRKYGRTLCYLCFPGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                            36
                                                                                                                                                                                                                                                                                                                                                            Euteleostomi;
Murinae; Rattus
                                                                        -SGTQRSAISSVSTGLHSLAAFRGLMKRRSSV
                                                                                                         GATLAPOPLHSISCRIEEISPSTLKNSLFPSPISSVSPGLHSFGDNHRLMLRRKSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -GGLSCL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       channel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               in Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     --AATPGPSTRNVRATV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PubMed=11875121; DOI=10.1210/me.16.3.621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Czirjak G., Enyedi P.;

"TASK-3 Dominates the Background Potassium Conductance in Glomerulosa Cells.";

Mol. Endocrinol. 16:621-629(2002).

-!- SIMILARITY: Belongs to the two pore domain potassium c (TC 1.A.1.8) family.

EMBL; AF391084; AAK69764.1; -. GO; GO:0016021; C:integral to membrane; IEA.

GO; GO:0005216; F:ion channel activity; IEA.

GO; GO:0006811; P:ion channel activity; IEA.

GO; GO:0006813; P:potassium channel activity; IEA.

GO; GO:0006813; P:potassium ion transport; IEA.

GO; GO:0006813; P:potassium ion transport; IEA.

PRINTS; PR01333; 2POREKCHANNEL.

PRINTS; PR01995; TASK3CHANNEL.

PRINTS; PR01995; TASKCHANNEL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       domain potassium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Transmembrane; Transport 734EB0EEA1ED1828 CRC64;
                                      - PONF
                                                                                                                                                                                                                                                                                                                                       Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; E
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
NCBI_TaxID=10116;
                                                                                                                                                                                                                                           Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 994; DB 2;
Pred. No. 9.7e-69,
5; Mismatches 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LRFMTMNAEDEKRDAEHRALLTHNGQAVGL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NWGDDDDDDDDAVENVVVTTPVPPAVAAAA
                    - LQSVCSCACYRSQ
                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ionic channel;
AA; 44357 MW;
                                                                                                                                                                                                                                          (TrEMBLrel. 19, (TrEMBLrel. 19, (TrEMBLrel. 24,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 49.1%;
Matches 217; Conservative 4
                                                                                                                                                                                                                                                                                                 TASK-3
                                                                                                                                                                                                         PRELIMINARY;
                                                                        GGRYSDTPSHPCLC
```

		<del></del>		
325 WYKSREKLQYSIPMIIPRDLSTSDTCVEHSHSSPGGGRYSDTPSHPCLCSGTQ-RSAIS 383	SULT 11  JLD4  PRELIMINARY; PRT; 395 AA.  Q9JLD4;  Q9JLD4;  Q1-OCT-2000 (TrEMBLrel. 15, Last sequence update)  01-OCT-2000 (TrEMBLrel. 24, Last annotation update)  01-JUN-2003 (TrEMBLrel. 24, Last annotation update)  Potassium channel TASK3.  Rattus norvegicus (Rat).  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.  NCBI TaxID=10116;	COUENCE FROM N.A.  RAIN=Sprague-Dawley; TISS  SDLINE=20200422; PubMed=10  IM Y., Bang H., Kim D.;  RASK-3, a New Member of th  Biol. Chem. 275:9340-934  SQUENCE FROM N.A.  RAIN=Sprague-Dawley; TISS  RAIN=Sprague-Dawley; TISS  RAIN=Sprague-Dawley; TISS	-1-SIMILARITY: Belongs to the two pore domain (TC 1.A.1.8) family.  EMBL; AF192366; AAF60229.1; GO; GO: 0016021; C: integral to membrane; IEA. GO; GO: 0005216; F: ion channel activity; IEA. GO; GO: 0005267; F: potassium channel activity; GO; GO: 0006811; P: ion transport; IEA. GO; GO: 0006813; P: potassium ion transport; IEA. InterPro; IPR005821; Ion trans.  InterPro; IPR005821; Ion trans.  InterPro; IPR003280; K+channel_pore.  InterPro; IPR003280; K+channel_pore.  InterPro; IPR00329; TASK_channel.  Pfam; PF00520; Ion trans; 1.  PRINTS; PR01333; 2POREKCHANNEL.  PRINTS; PR01585; TASK3CHANNEL.  PRINTS; PR01095; TASKCHANNEL.  Ion transport; Ionic channel; Transmembrane; TSEQUENCE 395 AA; 44365 MW; 3F76F7923A3AFC7	Query Match       45.4%; Score 955.5; DB 2; Length 395;         Best Local Similarity       48.4%; Pred. No. 9.3e-66;         Best Local Similarity       48.4%; Pred. No. 9.3e-66;         Matches 214; Conservative 44; Mismatches 97; Indels 87; Gaps 9;         1 ENVRILALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGGYEELE 60         :
8 6 8 6	00000000000000000000000000000000000000	RAR	S X X X X X X X X X X X X X X X X X X X	4666666

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                        348
                                                                                                                                                                                                      373
                     |||:||| ::: : | :| | : | : | LRFLTMNTDEDLLEGEVAQILAGNPRRVVVRVPQSRKRHHPMYFLRKYGRTLCYLCFPGA
  --SG
                                                                                                                                                                                                     -HSVSC----RVEEIP--PDVLRNTYFRSPFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cell. Neurosci. 18:632-648(2001).

FUNCTION: pH-dependent, voltage-insensitive, background potassium channel protein.

SUBCELLULAR LOCATION: Integral membrane protein (Potential).

TISSUE SPECIFICITY: Expressed in the CNS but not in heart, lung, liver, kidney, intestine and skeletal muscle. The highest expression was found in the olfactory nuclei, piriform cortex, cerebellum, antedorsal thalmic nucleus, pontine nucleus, dorsal raphe and several nuclei in the medulla. Shows a non-homogeneous distribution in the hippocampus. Expressed at highest levels in the lateral posterior and inferior portions and at medium levels
                                                                                VRPRDPVTCAAAAGGVGVGVGCSGFRNVYAEVLHFQSMCSCL
                                                                                                                                                             WYKSREKLQYSIPMIIPRDLSTSDTCVEHSHSSPGGGRYSDTPSHPCLCSGTQ-RSAIS
                                                                                                                                                                                                                                                                                                                                                                                                                          28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Potassium channel subfamily K member 9 (Acid-sensitive potassium channel protein TASK-3) (Two pore potassium channel KT3.2) (Fragment)
Name=Kcnk9; Synonyms=Task3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE SPECIFICITY.

MEDLINE=21624462; PubMed=11749039; DOI=10.1006/mcne.2001.1045;

Karschin C., Wischmeyer E., Preisig-Mueller R., Rajan S., Derst C.

Grzeschik K.-H., Daut J., Karschin A.;

"Expression pattern in brain of TASK-1, TASK-3, and a tandem pore domain K(+) channel subunit, TASK-5, associated with the central
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         channels closely
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY: Belongs to the two pore domain potassium channel (TC 1.A.1.8) family.
                                                                                                                      303 NWGDDDDDDDDAVENVVVTTPVPPAVAAAA----AATPGPSTRNVRATV-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zhadina M., Pountney D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=Sprague-Dawley;
MEDLINE=21324619; PubMed=11431495;
Vega-Saenz de Miera E., Lau D.H.P., Zhadina M.,
Coetzee W.A., Rudy B.;
"Kt3.2 and kt3.3, two novel human two-pore k(+)
related to TASK-1.";
                                                                                                                                                                                                                                                                                                                                                                                       237 AA.
LRFMTMNAEDEKRDAEHRALLTHNGQAVGL-
                                                                                                                                                                                                                                           SVSTGLHSLAAFRGLMKRRSSV 405
                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Neurophysiol. 86:130-142(2001)
                                                                                                                                                                                                                                                                   :: |:|: | : | : | | | | | : AIPPGMHTCGENHRLHIRRKSI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AF257082; AAG33128.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nervous system."
                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            in neocortex.
                                                                                                                                                                                                                                                                                                                                                                                                     Q9ES08;
28-FEB-2003
28-FEB-2003
05-JUL-2004
                                       243
                                                                                                                                                                                                                                                                                  374
241
                                                                                                                                                             325
                                                                                                                                                                                                                                            384
                                                                            279
                                                                                                                                                                                                     349
                                                                                                                                                                                                                                                                                                                                                                                      CIW9 RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                auditory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   [2]
                                                                                                                                                                                                                                                                                                                                              RESULT
CIW9 RA
                                                                                                                                                                                                                                                                                                                                                                                                                                              엄
                                                                                                                    요
                                                                                                                                                                                                   요
                                                                            ઠે
                                                                                                                                                             8
                                                                                                                                                                                                                                            ð
```

· rup

-5

-483

-939

60-

σ

```
CIWF HUMAN
                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CIWF HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                           Best
                 a
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ದ್ದ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                     183
                                                                                                                                                                                                                                                                                                  SYYER
                                                                                                                                                                                                                                                                                                            YEELE
                                                                                                                                                                                                                                        PLTLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ttus
                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                      234
                                                                                                                                                                                                                                                                                                                                                      237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
:
                                                                                                                                                                                                                                                                                                                                                                                                                                             potassium
channel 5)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Φ
                                                                   Potassium;; Voltage-gated chann
                                                                                                                                                                                                                                                                                                    MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata, Vertebrata, Euteleostomi
Sciurognathi, Muridae, Murinae, Ra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a tandem por
                                                                                                                                                                                                                               ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGG
                                                                                                                                                                                                                                                                  RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGI
                                                                                                                                                                                                                                                                                                                                     WTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIGA
                                                                                                                                                                                                                                                                                                                                              (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Derst
                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PubMed=11749039; DOI=10.1006/mcne.2001.1045
                                                                                                                                                                                            237;
                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                             5 (Acid-sensitive acid-sensitive K+
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rajan S
                                                                                                                                        (Potential)
                                                                                                      (Potential)
                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    database
                                                                                                                                                                           A44D2D32BE08A7DB CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and a
with
                                                                    Ionic channel; Potassiu
ane; Transport; Voltage
Cytoplasmic (Potential)
Potential.
                                                                                                                       Cytoplasmic (Potential) Potential.
                                                                                                                                                         909; DB 1; Le
No. 2.1e-62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Karschin C., Wischmeyer E., Preisig-Mueller R., Grzeschik K.-H., Daut J., Karschin A.; "Expression pattern in brain of TASK-1, TASK-3, domain K(+) channel subunit, TASK-5, associated
                                                                                                                                                         (GlcNAc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kawano T., Nakajima S., Nakajima Y.;
Submitted (JAN-2002) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Potassium channel subfamily K member 15 (Acid
                                                                                                       М
                                                                                                                                        ~
                                                                                                                                                                                                                                                                                                                                                                                                  Z
                                                                                                                                                                                                             Mismatches
                                                                                                                                       Pore-forming
                                                                                                  Forements.
Pore-forming
                                                                                                                                                                                                                                                                                                                                                                                                  318
                                                                                                                                                Potential.
N-linked (
     InterPro; IPR003280; K+channel 2pore.
InterPro; IPR001622; K+channel pore.
InterPro; IPR005407; TASK3 channel.
InterPro; IPR003092; TASK channel.
PRINTS; PR01333; 2POREKCHANEL.
PRINTS; PR01585; TASK3CHANNEL.
PRINTS; PR01095; TASKCHANNEL.
Glycoprotein; Ion transport; Ionic char
                                                                                                               Potential
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nervous system.";
|. Neurosci. 18:632-648(2001)
                                                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                    Pred.
                                                                            Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN=Long Evans; TISSUE=Brain;
                                                                                                                                                                                                            29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Name=Kcnk15; Synonyms=Task5;
Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                          26674 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OF 82-318 FROM N.A.
                                                                                                                                                                                            43.2%;
                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                   29
101
128
158
179
207
237
233
                                                                           channel;
                                                                                                                                                                           Ä.
                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=Wistar;
MEDLINE=21624462;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TaxID=10116;
                                                                                                   78
108
129
159
184
219
237
237
                                                                                                                                                                                                                                                                                                                                                                                                         Q8R5I0; Q920G1;
28-FEB-2003 (Rel
28-FEB-2003 (Rel
                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein
                                                                                                                                                                                                            170;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ceil.
                                                                            Potassium
                                                                                                                                                                                            / Match
Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                             (rTASK-5)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                auditory
Mol. Cell
                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                    124
                                                                                                                                                                                                                                                                                                                                                     184
                                                                                                                                                                                                                                                                                                                                                                                                  RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                             TRANSMEM
                                                                                                               TRANSMEM
                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                TRANSMEM
                                                                                                                                                  TRANSMEM
                                                                                                                                                         CARBOHYD
                                                                                                                                                                                                                                                 4
                                                                                                                                                                                                                                                                                                    2
                                                                                                                                                                         SEQUENCE
                                                                                                      DOMAIN
                                                                                                                                        DOMAIN
                                                                                                                       DOMAIN
                                                                                     DOMAIN
                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI
                                                                                                                                                                                                                                                                                                                                                                                          RAT
                                                                                                                                                                                                                                                                                                                                                                                RESULT
CIWF RP
                                                                                                                                                                                                    Best
                                                                                                                                                                                                                                                                                                                                                                                                                                           REER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                    ар
                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                      20
                                                                                                                                                                                                                                                                                                     ઠ
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .,
,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGGYEELE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGIPLTLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIGAFLNLVV
          activity
FUNCTION: Probable potassium channel subunit. No channel activity observed in heterologous systems. May need to associate with another protein to form a functional channel.
SUBUNIT: Heterodimer (Potential).
SUBCELLULAR LOCATION: Integral membrane protein.
TISSUE SPECIFICITY: Brain-specific. Highly expressed in auditory nuclei, in Purkinje cells and in olfactory bulb mitral cells.
PTM: Phosphorylated (Potential).
SIMILARITY: Belongs to the two pore domain potassium channel (TC 1.A.1.8) family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ۲;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cytoplasmic (Potential).
Potential.
Pore-forming 2 (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A0629212F56834ED CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             886.5; Ub
No. 1.6e-60;
57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                channel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pore-forming 1 Potential.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ref
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                330 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ed. No. 1.6
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Voltage-gated ch
Cytoplasmic (
Potential.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Potential.
Cytoplasmic
R -> W (in Re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Potassium;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       267
                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR005821; Ion trans.
InterPro; IPR003280; K+channel_2pore.
InterPro; IPR001622; K+channel_pore.
InterPro; IPR008073; TASK5 channel.
InterPro; IPR003092; TASK channel.
Pfam; PF00520; Ion trans; 1.
PRINTS; PR01333; 2POREKCHANEL.
PRINTS; PR01690; TASK5CHANNEL.
Ion transport; Ionic channel; Potassil
Transmembrane; Transport; Voltage-gati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LRFLA-SAEAPERAALRRASVFRRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LRFMTMNAEDEKRDAEHRALLTHNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35651 MW;
                                                                                                                                                                                                                                                                                                                                           EMBL; AF467250; AAL77036.1;
EMBL; AF294353; AAK97094.1;
RGD; 619733; Kcnk15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           42.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              66.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 101
128
158
179
209
243
318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           l Similarity
175; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          318 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80
1129
1129
1159
1244
315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 و
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       244
```

AND

```
SEQUENCE FROM N.A., AND VARIANTS GLU-95; THR-260 AND LEU-323.

MEDLINE=21638749; PubMed=11780052; DOI=10.1038/414865a;

A Deloukas P., Matchews L.H., Ashurst J.L., Burton J., Gilbert J.G.R., Jones M., Stavrides G., Almeida J.P., Babage A.K., Bagguley C.L., Bailey J., Barlow K.F., Bates K.M., Beard L.M., Beare D.M., Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J., Beasley O.P., Burten Y.P., Carder C., Carter N.P., Cloapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M., Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R., Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R., Bilington A.G., Frankland J.A., Fraser A., French L., Garner P., Blington A.G., Harley J.L., Heath P.D., How S., Holden J.L., Howden P.J., Howden D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E., Hurt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D., Kay M.P., Kimberley A.M., King A., Knights A., Laid G.K., Lawlor S., Leversha M.A., Lloyd C., Lloyd D.M., Lovell J.D., Marsh V.L., Matern S.L., McConnachie L.J., McLay K., McMurray A.A., Almines S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T., Oliver K., Parker A., Patel R., Pearce T.A.V., Peck A.I., A Rice C.M., Ross M.T., Scott C.E., Sehra H.K., Shownkeen R., Sims S., Skuce C.D., Smith M.L., Soderlund C., Steward C.A., Sulston J.E., Swann R.M., Sycamore N., Talley D.L., Thomas D.W., Thorpe A., Rocker S., Wilmiehead S.L., Whittaker P., Willey D.L., Williams L., Williams S.A., Whittehead S.L., Whittaker P., Willey D.L., Williams L., Williams S.A., Rocker J., Durbin R.M., Bentley D.R., Beck S., Rocker J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nature 414:865-871(2001).

-!- FUNCTION: Probable potassium channel subunit. No channel activit observed in heterologous systems. May need to associate with another protein to form a functional channel.

-!- SUBUNIT: Heterodimer (Potential).

-!- SUBCELLULAR LOCATION: Integral membrane protein.

-!- TISSUE SPECIFICITY: Detected in pancreas, heart, placenta, lung,
 Lo-reb-2003 (Rel. 41, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Potassium channel subfamily K member 15 (Acid-sensitive potassium channel protein TASK-5) (TWIK-related acid-sensitive K+ channel 5)
(Two pore potassium channel KT3.3).
                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A., VARIANTS GLU-95; THR-260; HIS-261 AND LEU-323, MUTAGENESIS OF ARG-138; 141-LEU--CYS-145; TRP-151 AND CYS-153.

TISSUE=Brain, Colon, and Ovarian carcinoma;
MEDLINE=21624462; PubMed=11749039; DOI=10.1006/mcne.2001.1045;
Karschin C., Wischmeyer E., Preisig-Mueller R., Rajan S., Derst C. Grzeschik K.-H., Daut J., Karschin A.;
"Expression pattern in brain of TASK-1, TASK-3, and a tandem pore domain K(+) channel subunit, TASK-5, associated with the central
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Coetzee W.A., Rudy B.;
"KT3.2 and KT3.3, two novel human two-pore K(+) channels closely
related to TASK-1.";
                                                                                                                                                                                                  Chordata; Craniata; Vertebrata; Euteleostomi
Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          comparative analysis of human chromosome 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=21324619; PubMed=11431495;
Vega-Saenz de Miera E., Lau D.H.P., Zhadina M., Pountney D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   channel fa
databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ashmole I., Goodwin P.A., Stanfield P.R.; "TASK-5, a novel member of the tandem pore K+Submitted (JAN-2001) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ory nervous system.";
Cell. Neurosci. 18:632-648(2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            86:130-142(2001)
                                                                                                                                                                                                Eukaryota, Metazoa, Chordata,
Mammalia, Eutheria, Primates,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence and
                                                                                                                                                                               (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rudy
Q9H427; Q9HBC8;
28-FEB-2003 (Rel. 4
28-FEB-2003 (Rel. 4
05-JUL-2004 (Rel. 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Neurophysiol.
                                                                                                                                                                                                                                               NCBI TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM
TISSUE=Brain;
                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "The DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               auditory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rogers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mol
```

vity

its h a collaboration EMBL outstation -This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch). 121 184 64 61 NVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGGYEELER Gaps in prostate functional channel functional functional channel ð 31; lack 330 InterPro; IPR003280; K+channel\_2pore.
InterPro; IPR001622; K+channel\_pore.
InterPro; IPR008073; TASK5\_channel.
InterPro; IPR003092; TASK channel.
InterPro; IPR003092; TASK channel.
PRINTS; PR01333; 2POREKCHĀNEL.
PRINTS; PR01690; TASK5CHĀNNEL.
PRINTS; PR01095; TASKCHĀNNEL.
Ion transport; Ionic channel; Polymorphism; Potassium;
Potassium channel; Transmembrane; Transport; Voltage-gated DOMĀIN domain potassium levels Length Indels ŏ ono of of (Potential) 2 (Potential) CRC64; functional expression. W->R: No effect on lack lack LAAKC->HRAKK: No effect on lack Cytoplasmic (Potential) Potential. Cytoplasmic (Potential) G -> E (in TASK-5B). lower G -> E (in TASK-5B).
/FTId=VAR 014211.
P -> T (in TASK-5B).
/FTId=VAR 014212.
P -> H (in TASK-5A).
/FTId=VAR 014213.
P -> L (in TASK-5B).
/FTId=VAR 014214.
/FTId=VAR 014214.
R->Y: No effect on le DB 1; 83; on AA2A54D0615BC53C Score 836.5; DB effect at Н ed. No. 1.36 Mismatches Potential. Pore-forming Forencial. Pore-forming and two pore expression expression expression Potential Potential N<sub>O</sub> testis, Belongs to the family. 35; and EMBL; AF294350; AAK97091.1; EMBL; AF294351; AAK97092.1; EMBL; AF294352; AAK97093.1; EMBL; AF257081; AAG33127.1; EMBL; AF336342; AAK37518.1; EMBL; AL118522; CAC14068.1; Genew; HGNC:13814; KCNK15. 36130 MW; 39.78; 54.6%; Conservative ovary 8 29 101 1128 1158 1179 209 243 330 260 261 323 138 145 151 153 kidney, 330 AA; Similarity (TC 1.A.1.8) and spleen. 9 108 1129 1159 1189 2223 244 95 260 261 323 138 141 151 153 Genew; HGNC MIM; 607368 179; TRANSMEM DOMAIN TRANSMEM DOMAIN TRANSMEM DOMAIN ~ 62 65 ß 122 TRANSMEM 125 SEQUENCE Query Match Local VARIANT VARIANT MUTAGEN MUTAGEN MUTAGEN MUTAGEN VARIANT VARIANT DOMAIN Matches Best g g ð 8

· rup

S ı

-483

g m 9

-09

ઠે

```
61
                                                                                                                                                                                                                                                                                                                                                               64
                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                       124
                                                                                                                                                                                                                                                                                                                    4
                                                                                                                                                                                                                                                                                                                                                                                                                            179
                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        293
                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           time
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Job
  В
                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                             d
                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                            280
                                                                  304
TFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIGAFLNLVVL
                                                           245 RFLVASADWPERAARPPSPRPPGAPESRGLWLPRRPARSVGSASVFCHVHKLERCARDNL
                                             CLSGSL
                                                                                                                                                                                                                     OML)
                                                                                                                                                                                                                                                                dea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           H. R. ;
K+
                                                                                                                                                                                                                                        Name=Bup-9; ORFNames=F34D6.3;
Caenorhabditis elegans.
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoi
Rhabditidae; Peloderinae; Caenorhabditis.
NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Perez de la Cruz I., Horvitz H.R.;
Submitted (JUL-2003) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: Belongs to the two pore domain potassium channel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. MEDLINE=22896676; PubMed=14534247; de la Cruz I.P., Levin J.Z., Cummins C., Anderson P., Horvitz H. "sup-9, sup-10, and unc-93 may encode components of a two-pore K channel that coordinates muscle contraction in Caenorhabditis
                                                                                                                                                                       017185; 076795;
01-JAN-1998 (TrEMBLrel. 05, Created)
01-OCT-2001 (TrEMBLrel. 18, Last sequence update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
Suppressor protein 9 (Putative potassium channel subunit n2P38)
pore K+ channel).
                                                                                                                                                                                                                                                                                                                                        WormBase Consortium; "Genome sequence of the nematode C. elegans: a platform for investigating biology. The C. elegans Sequencing Consortium."; Science 282:2012-2018(1998).
                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=Bristol N2;
Murray J., Wohldmann P., O'Neal D.;
"The sequence of C. elegans cosmid F34D6.";
Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             to the EMBL/GenBank/DDBJ databases
                                           - EHRALLTHNGQAVGLGGLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     L.;
) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the EMBL/GenBank/DDBJ
                                                                                                           322
                                                                                                                                                                 329
                                                                                      GDVRPRDPVTCAAAAGGVGVGVGGSGFR
                                                                                                           --- GVVRGGQAPR
                                                                                                                                                                                                                                                                                                                   STRAIN=Bristol N2;
MEDLINE=99069613; PubMed=9851916;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Neurosci. 23:9133-9145(2003).
                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 to
                                            REMTMNAEDEKRDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wang Z.-W., Salkoff Submitted (AUG-1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (NOV-2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Consortium;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (JUN-2004)
                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=Bristol N2; Waterston R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. STRAIN-Bristol N2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                           305 GFSPPSSP
                                                                                                                                                                                                                                                                                                         N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                             FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=Bristol
WormBase Conso
                                                                                                                                                                                                                                                                                                         FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          elegans."
                       185
 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                            242
                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                      281
                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wilson R
                                                                                                                                            15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>4</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           [5]
                                                                                                                                            RESULT
                                                                                                                                                     7185
                       5
B
                                                                                                                                                                                   DEEDT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                   8000 M
                                                                                      ò
```

```
178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            123
                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HS --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -DEKLRHRHRKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MFOSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCI --GAAAFSYY
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGGYEELE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGIPLTLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VVLRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAGGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GVGVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEH-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ф
Э
                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                          329
                                                                                             WormBase, WBGene00006318; sup-9.
WormBase, WBGene00006318; sup-9.
WormPep; F34D6.3; CE28297.
GO; GO:0016020; C:membrane; IEA.
GO; GO:0005216; F:ion channel activity; IEA.
GO; GO:0006811; P:ion transport; IEA.
GO; GO:0006813; P:potassium ion transport; IEA.
InterPro; IPR005821; Ion trans.
InterPro; IPR003280; K+channel_2pore.
InterPro; IPR003092; K+channel_pore.
InterPro; IPR003092; TASK_channel.
Pfam; PF00520; Ion trans; I.
PRINTS; PR01333; 2POREKCHANEL.
PRINTS; PR01095; TASKCHANNEL.
Ion transport; Ionic channel; Transmembrane; Transport.
SEQUENCE 329 AA; 36992 MW; 338A6D9A577464CD CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -YOLP-
                                                                                                                                                                                                                                                                                                                                                                                                                          82;
                                                                                                                                                                                                                                                                                                                                                                                         Score 800; DB 2;
Pred. No. 8.5e-54;
; Mismatches 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23:01:10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CSC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2005,
                                                                                                                                                                                                                                                                                                                                                                                                                            51;
                       1 1 1
(TC 1.A.1.8) family.

EMBL; AF025454; AAC71151.2; -

EMBL; AF083652; AAC32863.1; -

EMBL; AY357729; AAQ84518.1; -

PIR; T32347; T32347.

PIR; T43509; T43509.
                                                                                                                                                                                                                                                                                                                                                                                        38.0%;
ilarity 47.8%;
Conservative 5:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 completed: September 15,
ne : 175 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 175; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SSPGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TEPHĠĠ
```

This Page Blank (uspto)

Sat

.rag

2 •

-483

## 5.1.6 Compugen Ltd version - 2005 GenCore (c) 1993 Copyright

model S using protein search, OM protein

Seconds 3 ; Search time 167 (without alignments) 937.952 Million cell 22:40:33 2005, 15, September Run on:

updates/sec

US-09-939-483-Title: Perfect

... STGLHSLAAFRGLMKRRSSV ENVRTLALIVCTFTYLLVGA.. score: Sequence:

405

BLOSUM62 Gapop 10.0 table: Scoring

Gapext 0.5

residues seds, 386760381 2105692 Searched:

hits satisfying chosen parameters:

2105692

oŧ

Total number

2000000000 length: length: seq Minimum DB Maximum DB

Minimum Match 0% Maximum Match 100% Listing first 45 summaries Post-processing:

4 Database

Geneseq\_16Dec04:\*
geneseqp1980s:\*
geneseqp2000s:\*
geneseqp2001s:\*
geneseqp2001s:\*
geneseqp2003as:\*
geneseqp2003as:\* 

printed Ø Pred. No. is the number of results predicted by chance to have score greater than or equal to the score of the result being prand is derived by analysis of the total score distribution.

# SUMMARIES

		dł			SUMMAKIES	
	Score	Query Match	Length	DB	ID	Description
-	2105	100.0	405	3	AAY95230	Aay95230 Mouse pot
7	ın.	т М	Н	ω	ADI27916	27916 Rat pr
e	81	· ·	394	ო	4	3 Muri
4	81		Ó	m	AAY79674	674 Human p
ហ	81	86.4	Ò	ო	872	7291 Human
9	81	86.4	Ò	ထ	7	7924 Human p
7	87	· ທ		ω	ADI27925	i27925 Human p
8	81	ú	Ø,	æ	91	7915 Human p
σ	40	٠. س	O	4	2	7620 Mouse
10	10	~	~	ო	0	0
11	0	ς.		m		18813 Protein
12	10	ζ.	7	4	393	38 Amino
13	10	ς.	~	Ŋ	27	13279 Human tr
14	10	ά.	7	ß	Φ	9 Human
15	10	52.3	374	ω		7948 Human
16	10	∾.	1	ω	ADR66129	12
17	10	ď	~	ω	ADR66471	5471
18	36.	φ.	'n	7	047	7
19	36.	σ.	0	4	AAE10679	Aael0679 Human TWI
20	36.	φ.	0	80	ADI27912	91
21	28.	٠ ص	$\sim$	4	AAB47334	Aab47334 FCTR11. 8
22	28.	9.	330	7	ADK18422	Adk18422 Human NOV
23	φ.	9	400	4	AAE10678	
24	28.	φ.		വ	AAE13286	1328
25	28.	39.4	400	ω	ADI27909	Adi27909 Human TWI

73 Novel hur 76 Peptide	636 Pept	bb28454 Peptide	91 Protein		Human b	478 Human li	239	336465 Human p	64375 Drosophi	1804 Amino a	1787 Drosop	95 Hun	Abo84626 Mouse can	4 Mouse	55 Novel h		Aau99893 Rat potas
ABG29273 AAM14676	ABB33636	845	σ	AAM66810	AAM54409	7	AAM02399		ABB64375	0			ABO84626		AAU81355		AAU99893
44	4, 4	4	4	4	4	4	4	Ŋ	4	4	4	9	æ	ß	Ŋ	₩	Ŋ
4	279	. [-	7	7	7	7	7	7	4	0	σ	Н	σ	σ	m	0	9
37.0	9.0	. 6	è.	6.	9	٠.	٠,	φ.	Ŋ.	ů.	4.	9	7.	7.	7.	۲.	7.
779.5	99	9	9	9	9	9	9	9	S	52.	•	61	9	64.	•	61.	S
26																	

### ALIGNMENTS

TASK; TWIK-related acid-sensitive K+ channel; mouse; potassium channel; drug screening; hypertension; hypotensive; epilepsy; arrhythmia; vascular diseases; neurodegenerative disease; ischaemia; anoxia; endocrine disease; muscle disease; therapy. "O-phosphorylated" "O-phosphorylated" "O-phosphorylated" /note= "N-glycosylated" 334 Location/Qualifiers Ş Ξ 405 Lazdunski CENT NAT RECH SCI TASK 98US-0107692P 99US-00436265 99WO-IB001886 AAY95230 standard; protein; (first entry) Mouse potassium channel /note= 403 /note= 404 /note= Lesage F, WO200027871-A2 Modified-site Modified-site Modified-site Modified-site (CNRS ) CNRS musculus 09-NOV-1998; 08-NOV-1999; 29-AUG-2000 09-NOV-1999 8-MAY-2000 Duprat F, AAY95230; Mus Key RESULT AAY9523 

WPI; 2000-376487/32

of New nucleic acid encoding a non-inactivating outwardly rectifying potassium transport channel, designated TASK2, useful in the treatment hypertension or dysfunctions of the kidney, liver or pancreas.

Disclosure, Fig 8; 91pp; English

2

Sep

Sat

```
K+ channel), a member of a new family of 2P domain potassium channels, also including human TWIK-1 (see AAY79673), human TASK1 (see AAY79674) and novel human TASK2 (see AAY79675). Human and mouse TASK proteins share 85% identity, indicating that they are products of orthologue genes. Host cells expressing TWIK-1 family members can be used to screen for substances that modulate the activity of members of the TWIK-1 family of potassium channels. The drugs identified may be useful in the treatment of diseases of the heart or of the nervous system, such as epilepsy, arrhythmia, vascular diseases, neurodegenerative diseases, kidney, liver or pancreas diseases, hypertension, diseases associated with ischaemia or anoxia, endocrine diseases associated with anomalies of hormone secretion, and muscle diseases
                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                        GIPLTLI
                                                                                                                                                                                                                                                           ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGGYEELE
                                                                                                                                                                                                                                                                                                               PLTLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       isease;
order;
                                                                                                                                                                                                                                                                                                                                                                                                             LR FMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGVGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SHSSPGG
                                                                                                                                                                                                                                                                                                                                                                                       AFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SHSSPGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rat; ion channel family; ICF; cancer; leukaemia; Alzheimer's dis
Parkinson's disease; multiple sclerosis; epilepsy; hepatic disoricardiovascular disorder; cytostatic; neuroprotective; nootropic; antiparkinsonian; hepatotropic; cardiovascular.
                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                              MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAA
                                                                                                                                                                                                                                                                                                                        MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAA
                                                                                                                                                                                                                                                                                                               RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEH
                                                                                                                                                                                                              Length 405;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        405
                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 2105; DB 3;
Pred. No. 2.7e-224;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      412
                                                                                                                                                                                                                                     ..
0
                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-00515520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2002US-00146733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entry)
                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  norvegicus
                                                                                                                                                                                    405 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rat protein #1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-MAY-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     06-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   04-SEP-2003
                                                                                                                                                                                                                                 405;
                                                                                                                                                                                                           Query Match
Best Local S
Matches 405
                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                      Н
                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                              н
                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADI27916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADI27916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 2
ADI27916
           원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           임
                                                                                                                                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ⋩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                              ò
```

```
The invention relates to TWIK-6, TWIK-7, IC23927, TWIK-8, IC47611, IC47615, HNMDA-1, TWIK-9, alpha-2delta-4, 54414 and 53763 ion channel family (ICF) nucleic acids and proteins. The TWIK-6, TWIK-7, IC23927, TWIK-8, IC47611, IC47615, HNMDA-1, TWIK-9, alpha-2delta-4, 54414 and 53763 ICF nucleic acids and proteins may be used for preventing, diagnosing and treating ICF-related diseases. The sequences may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of ICF proteins by expressing inactive proteins or complement the ICF proteins of ICF proteins of ICF proteins and in assays to identify modulators of ICF protein expression and activity. The antipodies in antibodies, agonists and antagonists may be used to anti-ICF protein antibodies, agonists and antagonists may be used to used as diagnostic agents for detecting the presence of ICF proteins in samples (e.g. by immunoassay). The nucleic acids and proteins may be used to prevent, diagnose and treat a wide variety of disorders, e.g. cancers and leukaemia, Alzheimer's disease, Parkinson's disease, multiple caleragenere represents a rat protein used in the scope of the invention.

Note: The sequence data for this patent is also available in electronic format from USPTO at sequence.html.
                                                                                                                                                                                                                                                                                                                                                                                          TWIK-8, IC47611, IC47615, HNMDA-1, TWIK-9, 53763 nucleic acids and proteins, useful for d treating e.g. cancers, Alzheimer's disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGIPLTLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     э
Э
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 2065.5; DB 8
Pred. No. 6.7e-220;
; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                 Silos-Santiago
                                                                                                                                                                                                                                                                                                                                                                                                                       preventing, diagnosing and treating e.g. cardiovascular disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 9; 638pp; English
2000US-0185938P.
2000US-0195734P.
2000US-0195734P.
2000US-019593P.
2000US-0195937P.
2000US-0235018P.
2000US-0235018P.
2000US-0256240P.
2000US-0256240P.
2000US-025628028P.
2001US-00833081.
2001US-00843128.
2001US-00843128.
2001US-00964252.
2001US-00964256.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98.1%;
ilarity 98.0%;
Conservative
                                                                                                                                                                                                                                                                                                     (MILL-) MILLENNIUM PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GVQWRFAG
                                                                                                                                                                                                                                                                                                                                 Glucksmann MA,
                                                                                                                                                                                                                                                                                                                                                                                            IC23927,
                                                                                                                                                                                                                                                                                                                                                                                                        54414, or
                                                                                                                                                                                                                                                                                                                                                               WPI; 2004-069000/07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             412 AA;
                                                                                                                                                                                                                                                                                                                                                                                           TWIK-6, TWIK-7, alpha2delta-4, E
29-FEB-2000;
03-MAR-2000;
07-APR-2000;
26-APR-2000;
19-SEP-2000;
25-SEP-2000;
15-DEC-2000;
18-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
22-APR-2001;
11-APR-2001;
25-APR-2001;
25-SEP-2001;
25-SEP-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure;
                                                                                                                                                                                                                                                                                                                                Curtis RAJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Loc
Matches
    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   엄
```

 $\alpha$ 

120

180

184

and

S •

483

ŧ σ 3 g

g 0

uB

240

180

183

300

<del>Q</del>

ઠે

d

ò

ઠે

움

EXTXR

```
New nucleic acid encoding a non-inactivating outwardly rectifying potassium transport channel, designated TASK2, useful in the treatment hypertension or dysfunctions of the kidney, liver or pancreas.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TASKI; TWIK-related acid-sensitive K+ channel 1; human; potassium channel; drug screening; hypertension; hypotensive; epilepsy arrhythmia; vascular diseases; neurodegenerative disease; ischaemia; anoxia; endocrine disease; muscle disease; therapy.
                                                                       MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                           GVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEHSHSSPGG
LR FMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVR PRDPVTCAAAAGGVGV
                                                                                                                                                                                                                                                          -GGSAHTTDTASSTAAA
                                                                                                                                                                                                                                                                                                                                                                   405
                                                                                                                                                                                                                                                                                                                                                                                                      394
                                                                                                                                                                                                                                                                                                                                                                 "O-phosphorylated"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "O-phosphorylated"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "O-phosphorylated"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "O-phosphorylated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "N-glycosylated"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lazdunski
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TASK1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98US-0107692P
99US-00436265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-IB001886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RECH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human potassium channel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note=
323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note≕
383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note=
392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CENT NAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-376487/32
N-PSDB; AAA27746.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lesage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200027871-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CNRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09-NOV-1998
08-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     09-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY79674
                                       64
                                                                                                                                                                                                                                                           244
                                                                                                            124
                                                                                                                                                                                    184
                                                                                                                                                                                                                                                                                                                                                                                                        350
                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                  292
    61
                                                                          21
                                                                                                                                                181
                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (CNRS )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Duprat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   THE THE TEACHER AND THE TEACHE
                                                                         ò
                                                                                                        g
                                                                                                                                             ò
                                                                                                                                                                                 a
                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                      원
    ਠੋ
                                                                                          297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to human and mouse TREK-1 potassium channel proteins and their corresponding DNA molecules. TREK-1 nucleic acid is useful for transfecting cells to induce expression of the TREK-1 potassium channel protein. These cells are then used in assays to identify compounds which have anaesthetic properties, producing a safe, reversible state of unconsciousness with concurrent amnesia and analgesia in a mammal upon inhalation. The present sequence is murine TASK potassium channel protein related to the invention
                     240
                                                      244
                                                                                                                              304
                                                                                                                                                                  357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
                                                                                                                                                                                                      64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63
                                                                                                                                                                                                      ო
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    analgesia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGYEELE
                                                                                          LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGD-VRPRDPVTCAAAAG--G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TREK-1 potassium channel protein for
to identify compounds with anesthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    anaesthetic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  394;
                                                                                                                                                                                                                                                          PGGGGRYSDTPSHPCLCSGTQRSAISSVSTGLHSLATFRGLMKRRSSV
                                                                                                                                                                                                                                         PGGGGRYSDTPSHPCLCSGTQRSAISSVSTGLHSLAAFRGLMKRRSSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Murine; potassium channel protein; TREK-1; TASK;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 1819; DB 3;
Pred. No. 1.5e-192;
9; Mismatches 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Romey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 23; Page 34-35; 39pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŗ,
                                                                                                                                                                                                                                                                                                                                                                     394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lesage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Murine TASK potassium channel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    encoding a to be used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000WO-IB000226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99US-0119727P
2000US-00503089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    86.4%;
88.1%;
                                                                                                                                                                                                                                                                                                                                                                  standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RECH
                                                                                                                                                                                                                                                                                                                                                                                                                                             entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ធ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CENT NAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Honore
                                                                                                                                                                                                                                                                                                                                                                                                                                           (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000-549146/50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     transfecting cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 Similarity 357; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 394 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200047738-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12-FEB-1999;
11-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CNRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lazdunski M,
                                                                                                                                                                                                                                                                                                                                                                                                                                           10-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          properties.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 357
                                                                                                                                                                                                                                                                                                                                                                                                      AAE10343;
                                                                                          241
                                                     185
                   181
                                                                                                                             245
                                                                                                                                                                  298
                                                                                                                                                                                                     305
                                                                                                                                                                                                                                        358
                                                                                                                                                                                                                                                                          365
                                                                                                                                                                                                                                                                                                                                                                   AAE10343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (CNRS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amnesia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus sp
                                                                                                                                                                                                                                                                                                                                 RESULT 3
```

of

g

ep Ñ

Sat

```
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 349
                                                                                                                                                                                                                                                                                                                                                                                                                    123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                               of
                                                                                                                                                                                                                                                                                                                                                             63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; signal peptide-containing protein; HSPP; diagnosis; cancer; inflammation; cardiovascular disease; anticancer; anti-inflammatory; antimicrobial; nootropic; neuroprotective; cardiovascular; hepatotropic; antiasthmatic; gene therapy; cell proliferation; neurological disorder; reproductive disorder; developmental disorder; arteriosclerosis; reproductive disorder; developmental disorder; arteriosclerosis; cirrhosis; psoriasis; acquired immune deficiency syndrome; anaemia; asthma; Crohn's disease; infection; Alzheimer's disease; schizophrenia; Parkinson's disease; Huntington's diseases; ovulatory defect;
                                       The present sequence is that of human TASK1 (TWIK-related acid-sensitive K+ channel), a member of a new family of 2P domain potassium channels, also including TWIK-1 (see AAY79673) and novel TASK2 (see AAY79675).

TASK1 is expressed in many different tissues, and at particularly high levels in pancreas and placenta. Host cells expressing TWIK-1 family members can be used to screen for substances that modulate the activity of members of the TWIK-1 family of potassium channels. The drugs identified may be useful in the treatment of diseases of the heart or of the nervous system, such as epilepsy, arrhythmia, vascular diseases, neurodegenerative diseases, kidney, liver or pancreas diseases, hypertension, diseases associated with ischaemia or anoxia, endocrine diseases associated with anomalies of hormone secretion, and muscle
                                                                                                                                                                                                                                                                                                                             GVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEHSHSSPGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AFSHYEH
                                                                                                                                                                                                                                                                                                                                                                                         GIPLTLI
                                                                                                                                                                                                                                                                                                                                                                                                              GIPLTLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                 AFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGVGV
                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A-A
                                                                                                                                                                                                                                                                                                                                                                                     14;
                                                                                                                                                                                                                                                                                                                                                                                                                                              MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                              --GGSAHTTDTASSTA
                                                                                                                                                                                                                                                                            Length 394;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human signal peptide containing protein HSPP-68 SEQ ID NO:68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        394
                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 1819; DB 3;
Pred. No. 1.5e-192;
); Mismatches 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             standard; protein; 394
                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 88.1%;
Matches 357; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entry)
               91pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first
                ..
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        muscular dystrophy
                                                                                                                                                                                                                                             394 AA;
               Fig
               Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11-MAY-2000
                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY87291;
                                                                                                                                                                                                                                                                                                                                                                                                                   64
                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          124
                                                                                                                                                                                                                                                                                                                                                             4
                                                                                                                                                                                                                                                                                                                                                                                       19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY87291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY87291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
g
                                                                                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          а
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ద
```

```
human signal peptide-containing proteins HSPP-1 to HSPP-134. HSPPs have anticancer, anti-inflammatory, antimicrobial, nootropic, hepatotropic, neuroprotective, cardiovascular and antiasthmatic activities, and can be used in gene therapy. HSPPs can be used to treat or prevent disorders associated with decreased activity or function of HSPP. Antagonists of HSPP are used to treat or prevent disorders associated with increased activity or function of HSPP. Such diseases include cell proliferation (including cancer), inflammation, cardiovascular, neurological, reproductive or developmental disorders, (e.g. arteriosclerosis, reproductive or developmental disorders, (e.g. arteriosclerosis, cirrhosis, psoriasis, acquired immune deficiency syndrome, anaemia, asthma, Crohn's disease, Microbial or other infections, congestive or ischaemic heart disease, Alzheimer's, Parkinson's or Huntington's diseases, schizophrenia, ovulatory defects, muscular dystrophy). HSPP uncleic acids can be used for the recombinant production of HSPP, for detecting HSPP in standard hybridisation and amplification assays (for detecting HSPP in standard hybridisation and amplification assays (for diagnosis and monitoring), in gene therapy, as antisense, triplex-forming or ribozyme therapeutics, for detecting related sequences or genetic variations, and for chromosomal mapping. HSPP and antisense, or monitor, HSPP related diseases (in usual immunoassays), as therapeutic antisolists, in competitive drug screens, and for purification of HSPP from natural
                                                                                                                                                                                                                                                                                                                         treatment,
nd cardiovascular
                                                                                                                                                                                                                                ŭ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIGAFLNLVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                  Baughn MR; Hillman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 394;
                                                                                                                                                                                                                                                                                                                     New human signal peptide-containing proteins useful in tre
prevention and diagnosis of e.g. cancer, inflammation and
disease.
                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                Corley NC, Guegler KJ,
H, Patterson C, Reddy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1819; DB 3;
Pred. No. 1.5e-192;
; Mismatches 25;
                                                                                                                                                                                                                                                                                                                                                                                  327pp; English
                                                                                                                                                                                                         GA,
Yue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6;
                                                                                                        98US-0090762P.
98US-0094983P.
98US-0102686P.
                                                                            99WO-US014484
                                                                                                                                                     98US-0112129P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ch 86.4%;
1 Similarity 88.1%;
357; Conservative
                                                                                                                                                                                                               YT, Gorgone
Au-Young J,
                                                                                                                                                                                   PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                 Page 207-208;
                                                                                                                                                                                                                                                                           2000-160673/14
                                                                                                                                                                                                                                                                                           N-PSDB; AAZ98176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                394 AA;
                WO200000610-A2
                                                                                                                                                                                  (INCY-) INCYTE
                                                                                                                                                                                                                 Tang
                                                                                                                                                                                                                             IE,
                                                                                                        26-JUN-1998;
31-JUL-1998;
01-OCT-1998;
                                                                                                                                                     11-DEC-1998
                                              06-JAN-2000
                                                                            5-JUN-1999
                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                     ال کا
Akerblom
                                                                                                                                                                                                                                                                                                                                                                                 Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ч
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                Bandman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sources
                                                                                                                                                                                                                  Ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Loc
Matches
                                                                                                                                                                                                                                                                           WPI
ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
```

2

9

120

180

183

240

243

Homo

S

Φ

.rag

വ

```
360
300
                                                    349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and
                 291
                                                                                                                                                                                                          disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VIK-9,
sful for
disease
LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGVGV
                                   SHSSPGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         611,
channel
                                                 SHSSPGG
                                                                                                                                                                                                         Human; ion channel family; ICF; cancer; leukaemia; Alzheimer's disea Parkinson's disease; multiple sclerosis; epilepsy; hepatic disorder; cardiovascular disorder; cytostatic; neuroprotective; nootropic; antiparkinsonian; hepatotropic; cardiovascular.
                 ---AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ion (
                                 SIPMIIPRDLSTSDTCVEH
                                           --GGGGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TWIK-8, IC47611, IC47615, HNMDA-1, TW 53763 nucleic acids and proteins, use of treating e.g. cancers, Alzheimer's
              GGSAHTTDTASSTA
                                                                                      394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7, TWIK-8,
and 53763
                                                                     40
                                                                    IC23927,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        н
                                 CLWYKSREKLQY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Silos-Santiago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        relates to TWIK-6, TWIK-7, ...
         English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             е.
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      638pp;
                                                                                                                                   394
                                 GVGGSGFRNVYAEVLHFQSMCS
                                                                                                                                                                                                                                                                                                                          2000US-00515520.

2000US-0185938P.

2000US-0195734P.

2000US-019593P.

2000US-019593P.

2000US-0235018P.

2000US-0235018P.

2000US-0235018P.

2000US-0235018P.

2000US-0235018P.

2000US-0235018P.

2001US-0256588P.

2001US-00828035.

2001US-00843128.

2001US-00843128.

2001US-00957683.

2001US-00964252.

2001US-00964252.
                                                                                                                                                                                                                                                                                                           -00146733
                                                                                                                                    protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Glucksmann MA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TWIK-6, TWIK-7, IC23927, Twalpha2delta-4, 54414, or 53 preventing, diagnosing and cardiovascular disorders.
                                                                                                                                                                       entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                      (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2004-069000/07
                                                                                                                                                                                                                                                                                                           2002US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MILLENNIUM
                                                                                                                                    standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention rela
IC47615, HNMDA-1,
                                                                                                                                                                                        #2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEO
                                                                                                                                                                                                                                                                        US2003165891-A1
                                                                                                                                                                                        Human protein
                                                                                                                                                                                                                                                                                                                           29-FEB-2000;
03-MAR-2000;
07-APR-2000;
11-APR-2000;
19-SEP-2000;
25-SEP-2000;
25-SEP-2000;
25-SEP-2000;
25-SEP-2000;
18-DEC-2000;
21-DEC-2000;
28-FEB-2001;
11-APR-2001;
11-APR-2001;
25-APR-2001;
25-SEP-2001;
25-SEP-2001;
                                                                                                                                                                                                                                                      sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RAJ,
                                                                                                                                                                      06-MAY-2004
                                                                                                                                                                                                                                                                                                           5-MAY-2002
                                                                                                                                                                                                                                                                                         04-SEP-2003
                244
                                                   292
                                                                                      350
                                  301
                                                                                                                                   ADI27924
                                                                     61
                                                                                                                                                    ADI27924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Curtis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI;
                                                                                                                                                                                                                                                      Homo
                                                                                                                 RESULT 6
ADI27924
                                                                                                                                                   셤
                                                  日
                                 ò
                                                                                      심
                                                                    8
```

```
family (ICF) nucleic acids and proteins. The TWIK-6, TWIK-7, IC23927,
TWIK-8, IC47611, IC47615, HNWDA-1, TWIK-9, alpha-2delta-4, 54414 and
53763 ICF nucleic acids and proteins may be used for preventing,
diagnosing and treating ICF-related diseases. The sequences may be used
to treat disorders associated with decreased expression by rectifying
mutations or deletions in a patient's genome that affect the activity of
ICF proteins by expressing inactive proteins or to supplement the
ICF proteins by expressing inactive proteins may also be used as antigens in the production of ICF proteins. The proteins may also be used to antigens in the production of ICF protein expression and activity. The anti-ICF protein antibodies, agonists and antagonists may be used to regulate ICF protein antibodies, agonists and antagonists may be used to regulate ICF protein expression and activity. The antibodies may also be
cused as diagnostic agents for detecting the presence of ICF proteins in
samples (e.g. by immunoassay). The nucleic acids and proteins may be used
to prevent, diagnose and treat a wide variety of disorders, e.g. cancers
and leukaemia, Alzheimer's disease, Parkinson's disease, multiple
sclerosis, epilepsy, hepatic disorders and cardiovascular disorders. This
sequence represents a human protein used in the scope of the invention.
Note: The sequence data for this patent is also available in electronic
format from USPTO at seqdata.uspto.gov/sequence.html.
                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          123
                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; ion channel family; ICF; cancer; leukaemia; Alzheimer's disease; Parkinson's disease; multiple sclerosis; epilepsy; hepatic disorder; cardiovascular disorder; cytostatic; neuroprotective; nootropic; antiparkinsonian; hepatotropic; cardiovascular.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                       LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGVGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEHSHSSPGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             --GGGGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEQSHSSPGG
                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14;
                                                                                                                                                                                                                                                                                                                                                                                        Length 394;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            405
                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGRYSDTPSHPCLCSGTQRSAISSVSTGLHSLAAFRGLMKRRSSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1819; DB 8;
Pred. No. 1.5e-192;
9; Mismatches 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADI27925 standard; protein; 394
                                                                                                                                                                                                                                                                                                                                                                                                                        9,
                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 88.1%;
Matches 357; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first
                                                                                                                                                                                                                                                                                                                                                          394 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human protein #3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADI27925;
                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ното
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 7
ADI27925
      SK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <del>Q</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          සු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
```

9

80

83

σ

р Ra

S

3

```
Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo
                                                                                                                                                                                                                                                                                                                                              RESULT 8
ADI27915
                                                                                                                                       셤
                                                                                                                                                                                              a
D
                                                                                                                                                                                                                                                  셤
                                                                                 d
                                                                                                                                                                                                                                                                                                       d
                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                              ò
                                                        ð
                                                                                                            Š
                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to TWIK-6, TWIK-7, IC23927, TWIK-8, IC47611,

IC47615, HNMDA-1, TWIK-9, alpha-2delta-4, 54414 and 53763 ion channel
family (ICF) nucleic acids and proteins. The TWIK-6, TWIK-7, IC23927,

TWIK-8, IC47611, IC47615, HNMDA-1, TWIK-9, alpha-2delta-4, 54414 and
C fagnosing and treating ICF-related diseases. The sequences may be used
diagnosing and treating ICF-related diseases. The sequences may be used
to treat disorders associated with decreased expression by rectifying
mutations or deletions in a patient's genome that affect the activity of
ICF proteins by expressing inactive proteins or to supplement the
C ICF proteins by expressing inactive proteins may also be used as
antigens in the production of antibodies against ICF proteins and in
assays to identify modulators of ICF protein expression and activity. The
antigens in the production of antibodies against ICF proteins and in
c regulate ICF protein expression and activity. The antibodies may be used
to prevent, disgnose and treat a wide variety of disorders, e.g. cancers
and leukaemia, Alzheimer's disease, Parkinson's disease, multiple
c sequence represents a human protein used in the scope of the invention.
C format from USPTO at sequence uspto.gov/sequence.html.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and in
ctivity. The
used to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 may be used g. cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      r disorders. This the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         y be used
ctifying
activity of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ease
                                                                                                                                                                                                                                                                                                                                                                                                                                                            IK-9,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     useful
r's dise
                                                                                                                                                                                                                                                                                                                                                                                                                                                         TWIK-6, TWIK-7, IC23927, TWIK-8, IC47611, IC47615, HNMDA-1, TW alpha2delta-4, 54414, or 53763 nucleic acids and proteins, use preventing, diagnosing and treating e.g. cancers, Alzheimer's cardiovascular disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 394;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 1819; DB 8;
Pred. No. 1.5e-192
); Mismatches 25
                                                                                                                                                                                                                                                                                                                                                                                                     Silos-Santiago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 18; 638pp; English
                                                                             2000US-00515520.
2000US-0185938P.
2000US-0195734P.
2000US-0195993P.
2000US-0199799P.
2000US-0235018P.
2000US-0235018P.
2000US-0235018P.
2000US-0235018P.
2000US-0235018P.
2000US-0235059P.
2000US-0256588P.
2001US-00796720.
2001US-00833081.
2001US-00833081.
2001US-00843128.
2001US-00957683.
2001US-00964252.
2001US-00964252.
                                                                                                                                                                                                                                                                                                                                                                          (MILL-) MILLENNIUM PHARM INC
                                                      2002US-00146733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     86.4%;
larity 88.1%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                     Glucksmann MA,
                                                                                                                                                                                                                                                                                                                                                                                                                                2004-069000/07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 357; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            394 AA;
US2003165891-A1
                                                                                                                                  11-APR-2000;
26-APR-2000;
19-SEP-2000;
25-SEP-2000;
18-DEC-2000;
18-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-APR-2001;
06-APR-2001;
11-APR-2001;
25-SEP-2001;
17-DEC-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                 Curtis RAJ,
                                                                                                           03-MAR-2000
07-APR-2000
                           04-SEP-2003
                                                      15-MAY-2002
                                                                                               -FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                               WPI;
```

```
300
                                                                                                                    360
120
              123
                                                          240
                                                                        243
                                                                                                      291
                                                                                                                                   34
                                                                                                                                                                                                                                                                Se
                            MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
Human; ion channel family; ICF; cancer; leukaemia; Alzheimer's disea: Parkinson's disease; multiple sclerosis; epilepsy; hepatic disorder; cardiovascular disorder; cytostatic; neuroprotective; nootropic; antiparkinsonian; hepatotropic; cardiovascular.
                                                                                                                                                                394
                                                                                                                                                 40
                                                                                                                                                 Silos-Santiago
                                                                                                                                                                                                      Æ
                                                                                                                                                                                                     39
                                                                                                                                                                                                                                                                                                                                                            2000US-00515520.

2000US-0185938P.

2000US-0195734P.

2000US-0195734P.

2000US-019593P.

2000US-0199799P.

2000US-0235018P.

2000US-0235018P.

2000US-0235018P.

2000US-0235018P.

2000US-0235018P.

2001US-025628P.

2001US-00796720.

2001US-00843128.

2001US-00843128.

2001US-00964256.

2001US-00964256.
                                                                                                                                                                                                                                                                                                                                                2002US-00146733
                                                                                                                                                                                                      protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Glucksmann MA,
                                                                                                                                                                                                                                   entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MILLENNIUM PHARM
                                                                                                                                                                                                                                  (first
                                                                                                                                                                                                     standard
                                                                                                                                                                                                                                                 #1
                                                                                                                                                                                                                                                                                                                   US2003165891-A1
                                                                                                                                                                                                                                                 protein
                                                                                                                                                                                                                                                                                                                                                            29-FEB-2000;
03-MAR-2000;
07-APR-2000;
11-APR-2000;
26-APR-2000;
19-SEP-2000;
25-SEP-2000;
15-DEC-2000;
18-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2001;
25-SEP-2001;
25-SEP-2001;
25-SEP-2001;
                                                                                                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                                   2004
                                                                                                                                                                                                                                                                                                                                                15-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RAJ,
                                                                                                                                                                                                                                                                                                                                 04-SEP-2003
                                                                                                                    301
               64
                                                                                                       244
                                                                                                                                   292
                                                                                                                                                                350
                                                                                                                                                                                                     2
                              121
                                            124
                                                          181
                                                                         184
                                                                                        241
                                                                                                                                                   361
                                                                                                                                                                                                                    ADI27915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (MILL-)
                                                                                                                                                                                                     ADI2791
                                                                                                                                                                                                                                   06-MAY-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Curtis
```

2

Gaps

14;

Indels

9.

9

EELE

GGY

63

|||||||||

႕

ò

d

**!** 

.rag

```
The invention relates to TWIK-6, TWIK-7, IC23927, TWIK-8, IC47611, IC47615, HNMDA-1, TWIK-9, alpha-2delta-4, 54414 and 53763 ion channel family (ICF) nucleic acids and proteins. The TWIK-6, TWIK-7, IC23927, TWIK-8, IC47611, IC47615, HNMDA-1, TWIK-9, alpha-2delta-4, 54414 and 53763 ICF nucleic acids and proteins may be used for preventing, diagnosing and treating ICF-related diseases. The sequences may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of ICF proteins by expressing inactive proteins or coupplement the contigens in the production of antibodies against ICF proteins and in assays to identify modulators of ICF protein expression and activity. The antibodies in the protein antibodies, agonists and antagonists may be used to anti-ICF protein antibodies, agonists and antagonists may be used to regulate ICF protein expression and activity. The antibodies may also be used as diagnostic agents for detecting the presence of ICF proteins in samples (e.g. by immunoassay). The nucleic acids and proteins may be used to prevent, diagnose and treat a wide variety of disorders, e.g. cancers and leukaemia, Alzheimer's disease, Parkinson's disease, multiple and leukaemia, Alzheimer's disease, Parkinson's disease, multiple sequence represents a human protein used in the scope of the invention. Note: The sequence data for this patent is also available in electronic format from USPTO at seqdata.uspto.gov/sequence.ttml.
                                                                                                         and
                                                                            ful for
disease
                                                                        acids and proteins, use J. cancers, Alzheimer's
                                                    IC47615, HNMDA-1,
                                                TWIK-6, TWIK-7, IC23927, TWIK-8, IC47611, alpha2delta-4, 54414, or 53763 nucleic aci preventing, diagnosing and treating e.g. ccardiovascular disorders.
                                                                                                                                                                            English
                                                                                                                                                                             638pp;
                                                                                                                                                                            8;
                                                                                                                                                                             ID NO
 2004-069000/07
                                                                                                                                                                              SEO
                                                                                                                                                                            Disclosure;
```

Length 395; DB 8; 1.5e-192; Score 1819; Di Pred. No. 1.5e 9; Mismatches 86.4**%**; 88.1**%**; Query Match Best Local Similarity Matches 357; Conser Ä Sequence 395

```
120
                                                                                 180
                                                                 124
                                                                                                 184
                                                                                                                                                 300
                                                                                                                                                                 292
                                                                                                                                                                                  360
                                                                                                                                                                                                350
                  9
                                  64
                                                                               MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                 GGYEELE
                                               SHSSPGG
                                                                                                                                                                                              SHSSPGG
                                                                                                                                                 AAGGVGV
                                                                                                                                                                -GGSAHTTDTASSTAAA-
 14;
                 ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERORLELROLELRARYNLSE
                                                                                                                                                                                GVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEH
                                                                                                                                                                                        --GGGGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEQ
                                                                                                                                                LR FMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAA
                                                                                                                                                                                                                405
                                                                                                                                                                                                                                395
  Indels
                                                                                                                                                                                                                GGRYSDTPSHPCLCSGTQRSAISSVSTGLHSLAAFRGLMKRRSSV
                                                                                                                                                                                                                         LRFMTMNAEDEKRDAEHRALLTRNGQAGGGG-
9;
 Conservative
                 Н
                                                 61
                                                                65
                                                                                121
                                                                                                125
                                                                                                                                 185
                                 S
                                                                                                                 181
                                                                                                                                                                245
                                                                                                                                                                                                293
                                                                                                                                                                                                                361
                                                                                                                                                241
                                                                                                                                                                                301
                                                                                                                                                                                                                               a
                                 셤
                                                                d
                                                                                                                                                                g
                                                                                                                                                                                                엄
                                                                                               g
                                                                                                                                日
                                                ò
                                                                                                                ઠે
                                                                                                                                                ઠે
                                                                                                                                                                                8
                                                                                                                                                                                                               δ
                 ð
                                                                                ठे
```

В

ò

ద

ò

원

ઠે

원

8

8

```
AAU07620 standard; protein; 309
                                               AAU07620;
         AAU07620
ID AAUC
RESULT
```

inward potassium flux; antihelminthic; nematode; Transmembrane potassium ion channel protein; pest control; membrane potential; pesticide; insect; 2P channel; mouse. 2P channel protein #1 entry) WO200161006-A2 musculus 21-NOV-2001 

23-AUG-2001

2001WO-US004680

14-FEB-2001;

2000US-00503849 15-FEB-2000;

CORP (BADI ) BASF

Pausch MH;

WPI; 2001-536570/59 N-PSDB; AAS12179.

improving n ion channel protein for conditions. a mutant potassium flux under acidic c New polypeptide, inward potassium

Example 18; Page 53; 131pp; English

in The invention relates to a mutant potassium ion channel protein, having four membrane spanning domains and two pore forming domains, comprising a mutation at the second pore forming domain. The expression of the mutant protein in a cell confers improved inward potassium flux and the ability to grow in the presence of potassium. Mutant proteins and their corresponding polynucleotide sequences can therefore be used to improve inward potassium flux into cells under acidic conditions by modulating the membrane potential using therapeutic agents. The sequences may be used to develop agonists and antagonists of potassium channel proteins in order to control pests such as nematodes and insects. This sequence represents a mouse 2P channel protein

Sequence 309 AA;

m ; 120 180 192 238 249 9 72 S 29 RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGIPLTLI MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER 1 ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGGYEELE Gaps 9 309 Indels Length Score 1404; DB 4; Pred. No. 1.3e-146; 2: Mismatches 10; 2 66.7%; 94.0%; Conservative Local Similarity 280; 13 Query Match Best Local **61** 73 121 133 181 239 193 Matches

AAB18807 standard; protein; 374 RESULT 10 AAB18807

250

at

```
WO200053628-A2
                                                                                                                                                                                                                                                                                                                                                   Duckworth DM,
                                                                                                                                                                                                                                                                                       02-MAR-2000;
                                                                                                                                                                                                                                                                                                        05-MAR-1999;
10-FEB-2000;
                                                                                                                                                                                                                                  sapiens
                                                                                                                                  22-JAN-2001
                                                                                                                                                                                                                                                                      14-SEP-2000
                                                                                                                  AAB18813;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Н
                                                    334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
301
                 285
                                   357
                                                                                               AAB18813
                                                                                                                                                                                                                                                                                                                                                                                                                         disease.
                                                                                                                                                                                                                                                                                                                                  (SMIK)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                   Ношо
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                               RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best
                                                                                       AAB188
                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                    유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ਠੇ
                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                              agnosis and
nd renal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                  polypeptide
                                                                                                                                                                                                                                                                     nsefnl
                                                                                                                                                                                                                                                                                                                                                                               sorders
                                                     pression;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ion and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GIPLTLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AFSOCEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGGVGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGGYEELE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GIPLTLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                The present sequence represents human DKCN1 polypeptide. The polype is a member of the potassium channel family. The DKCN1 polypeptides polynucleotides are useful for treating diseases including cancer, pulmonary, cardiovascular, inflammatory or renal diseases, pain, psychiatric disorders including depression and schizophrenia, neurodegenerative disease including Alzheimer's, neurological disormigraine, epilepsy, sleep-related disorders, erectile dysfunction alopecia. DKCN1 polynucleotides are useful as diagnostic reagents alopecia, mutations in the associated gene
                                                  Human; DKCN1; potassium channel; cancer; pulmonary disease; depres cardiovascular disease; inflammatory disease; renal disease; pain; psychiatric disorder; schizophrenia; neurodegenerative disease; Alzheimer's disease; neurological disorder; migraine; epilepsy; sleep-related disorder; erectile dysfunction; alopecia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                             50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ġi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          channel fami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                            374;
                                                                                                                                                                                                                                                                    and polynucleotides of the potassium channel faring agonists/antagonists of therapeutic use and cancer, pulmonary, cardiovascular, inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -SMVIHIPEEPRPSRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                          Meadows HJ
                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 3;
..1e-112;
                                   DKCN1 polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 1100; Di
Pred. No. 1.1e-
8; Mismatches
                                                                                                                                                                                                                         ე,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chapman
                                                                                                                                                                                                                                                                                                                 Claim 1; Page 25; 36pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                            48;
                                   human
                                                                                                                                                                                                         PLC
                                                                                                                                                                                                                                                                                                                                                                                                                                          52.3%;
ilarity 55.4%;
Conservative 48
                                                                                                                                                                              99GB-00005061
2000GB-00003112
                                                                                                                                                             2000WO-EP001750
                                                                                                                                                                                                         SMITHKLINE BEECHAM
                  entry)
                                                                                                                                                                                                                          RJ,
                                   ಥ
                                                                                                                                                                                                                          Godden
                 (first
                                                                                                                                                                                                                                           WPI; 2000-587424/55
N-PSDB; AAA75886.
                                   sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Matcn
Best Local Similarity
                                                                                                                                                                                                                                                                    Polypeptides and for identifying a treatment of cand
                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 374 AA;
                                                                                                                          WO200053628-A2
                                                                                                                                                                                                                          Duckworth DM,
                                                                                                                                                                             05-MAR-1999;
10-FEB-2000;
                                                                                                        sapiens
                                                                                                                                                            02-MAR-2000;
                 22-JAN-2001
                                                                                                                                            14-SEP-2000
                                   acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         184
AAB18807
                                                                                                                                                                                                         (SMIK)
                                                                                                         Homo
요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      검
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
```

```
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Polypeptides and polynucleotides of the potassium channel family, useful for identifying agonists/antagonists of therapeutic use and diagnosis and treatment of cancer, pulmonary, cardiovascular, inflammatory and renal
356
                                                 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present sequence is encoded by an expressed sequence tag (EST) which is related to a cDNA encoding a human DKCN1 polypeptide. The polypeptide is a member of the potassium channel family. The DKCN1 polypeptides and polynucleotides are useful for treating diseases including cancer, pulmonary, cardiovascular, inflammatory or renal diseases, pain, psychiatric disorders including depression and schizophrenia, neurodegenerative disease including Alzheimer's, neurological disorders, migraine, epilepsy, sleep-related disorders, erectile dysfunction and alopecia. DKCN1 polynucleotides are useful as diagnostic reagents for detecting mutations in the associated gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cargiovascular disease; inflammatory disease; renal disease; pain; psychiatric disorder; schizophrenia; neurodegenerative disease; hain; Alzheimer's disease; neurological disorder; migraine; epilepsy; sleep-related disorder; erectile dysfunction; alopecia; expressed sequence tag; EST.
                                           -YGGRSVAPONSFSAKLAPHYFHSISYK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGGYEELE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGIPLTLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                405
                                                                                                                                                    374
 GVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEHSHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50;
                                                                                                   SPGGGGRYSDTPSHPCLCSGTQRSAISSVSTGLHSLAAFRGLMKRRSSV
                                                                                                                             -TLKNSLFPSPISSISPGLHSFTDHQRLMKRRKSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 374;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                     a human DKCN1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Meadows HJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 1100; DB 3;
Pred. No. 1.1e-112;
3; Mismatches 86;
                            |:| ||:||:|::
-RYKADVPDLQSVCSCTCYRSQD-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ပ္ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                      ţ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chapman
                                                                                                                                                                                                                                                                                  Æ
                                                                                                                                                                                                                                                                                                                                                                                                                                     related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 12; Page 26; 36pp; English
                                                                                                                                                                                                                                                                             374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PLC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  52.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000WO-EP001750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99GB-00005061
2000GB-00003112
                                                                                                                                                                                                                                                                               protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SMITHKLINE BEECHAM
                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein encoded by an EST
                                                                                                                                                                                                                                                                                                                                                                                    entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 Similarity 55.4
229; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Godden
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2000-587424/55
N-PSDB; AAA75887.
                                                                                                                                                                                                                                                                                                                                                                                  (first
                                                                                                                                                                                                                                                                               standard;
                                                                                                                                                      IEEISPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 374 AA;
```

σ

ઠે

8

ਠੇ

원

```
300
                                                                            183
                                                                                                                                                                                                    284
                                                                                                                                                                                                                               356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cells in
lypeptide is
treating a
, proteins,
r treatment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; potassium channel protein; KCNB; breast tissue; cancer; stroke; potassium channel-associated disorder; brain associated disorder; epilepsy; Alzheimer's disease; Parkinson's disease; multiple sclerosis; migraine; psychiatric disorder; depression; schizophrenia; diabetes; bipolar disease; heart disease; arrhythmia; pancreas disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The KCNB
                                                                                                       MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                           AFSOCEE
                                                                                                                                                                                                                                                             FHSISYK
                                                                                                                                                                     AAGGVGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ssium
is or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                are
                                                                                                                                                                                                                              GVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEHSHS--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present sequence represents a human potassium channel protein, KCNB. KCNB is expressed in breast tissue. The KCNB polypeptides are useful for identifying a compound that modulates its activity. The polypeptide and nucleic acid are useful for detecting cancer cells biological samples. The inhibitor of the potassium channel polypeptuseful for inhibiting proliferation of a cancer cell and for treat potassium channel-associated disorder. The KCNB nucleic acids, proland/or antibodies are useful in the diagnosis or prognosis, or treating and/or antibodies.
                                                                                                                                                                                                                                                                                          405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ω
-TLKNSLFPSPISSISPGLHSFTDHQRLMKRRKSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A nucleic acid encoding a potassium channel, termed KCNB (potary channel expressed in breast), useful in the diagnosis, prognost treatment of diseases associated with altered KCNB activity or expression, e.g. cancer and diabetes.
                                                                                                                                                                     <u>LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAA</u>
                                                                                                                                                                                                                                                                                          --SPGGGGRYSDTPSHPCLCSGTQRSAISSVSTGLHSLAAFRGLMKRRSSV
                                                                                                                                                                                                                                                ---RYKADVPDLQSVCSCTCYRSQD---YGGRSVAPQNSFSAKLAPHY
                                                                Amino acid sequence of human potassium channel protein KCNB
                                                                                                                                                                                                  -SMVIHIPEEPRPSRP
                                                                                                                                                                                   Claim 16; Page 79; 82pp; English
                                                                                                                                                                                                                                                                                                                                                                                                 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-0186915P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001WO-US006801
                                                                                                                                                                                                                                                                                                                                                                                                protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      e.g. cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-522949/57
N-PSDB; AAH74999.
                                                                                                                                                                                                                                                                                                                                                                                                 AAG63938 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TULARIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      03-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pancreatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                AAG63938;
                                                                                                         181
                                                                                                                                                                                                                                                                                          357
                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (TULA-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mu D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo
                                                                                                                                                                                                                                                                                                                                                                                   AAG639
                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                           엄
                                                                                                                                     a
                                                                                                                                                                                                                                                           임
                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                         ð
```

```
ហ
                                                                                                                                                                                                                                                            123
                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                 183
                                                                                                                                                                                                                                                                                                                                                                    243
                                                                                                                                                                                                                                                                                                                                                                                                                                                 356
                                                                                                                                                                                   9
                                                                                                                                                                                                                                   -RYKADVPDLQSVCSCTCYRSQD---YGGRSVAPQNSFSAKLAPHYFHSISYK
                                                                                                                                                                                                 MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                                                                                        WTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIGAFLNLVV
                                                                                                                                                                                                                                                                                                                                                                                            LIRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGVGV
                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; transporter and ion channel; TRICH; akinesia; cystic fibrosis diabetes mellitus; Parkinson's disease; myasthenia gravis; dementia; cardiac disorder; angina; hypertension; myocarditis; hyperglycaemia; neurological disorder; Alzheimer's disease; cataract; infertility; Wilson's disease; schizophrenia; Grave's disease; addison's disease; Huntington's disease; multiple sclerosis; meningitis; hypotensive; cardiant; nootropic; neuroprotective; neuroleptic; ophthalmological; antithyroid; anticonvulsant; goitre; antiinflammatory.
of diseases associated with altered KCNB activity or expression. Such diseases are cancer, brain associated disorders (such as epilepsy, Alzheimer's disease, Parkinson's disease, stroke, multiple sclerosis, migraine), psychiatric disorders (such a depression, schizophrenia, bipolar diseases) and diseases related to the heart (such as arrhythmias), diseases related to pancreas (such as pancreatitis and
                                                                                                                                                                                GVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEHSHS
                                                                                                                                                         50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -TLKNSLFPSPISSISPGLHSFTDHQRLMKRRKSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -SPGGGGRYSDTPSHPCLCSGTQRSAISSVSTGLHSLAAFRGLMKRRSSV
                                                                                                                                  374;
                                                                                                                                                                                                                                                                                                                                                                                                                        -SMVIHIPEEPRPSRP
                                                                                                                                                         Indels
                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TRICH6 protein"
                                                                                                                               Score 1100; DB 4;
Pred. No. 1.1e-112;
; Mismatches 86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TRICH)-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Transmembrane domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. . 43
/label= Signal_peptide
26. .374
                                                                                                                                                                                                                                                                                                                                                                                                          mature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      channels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
1. .25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26. 374
/note= "Human n
225. 243
/label= Transme
                                                                                                                                                        48;
                                                                                                                               Query Match
Best Local Similarity 55.4%;
Matches 229; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       transporters and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first
                                                                                                        Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IEEISPS
                                                                arrhythmias),
diabetes)
                                                                                                        374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12-FEB-2002
                                                                                                                                                                                                                                                             64
                                                                                                        Sequence
                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                 124
                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                    184
                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                        244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAE13279
                                                                                                                                                                                                            4
                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        eptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo
  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                   유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                        ਠੇ
                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
```

WO200177174-A2

ρ ra

```
Modified-site
                                                     357
   301
                            285
                                                                                 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Modified
                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Domain
                                                                                                                                                                                                                                  Human
                                                                                                                       RESULT 14
AAE22989
                            g
                                                                                                                                                                                                                   a
a
                                                       ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                          tion associated associated comprising Ab
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      represents
or cell type
I DNA is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              284
                                                                                                                                                                                                                                                                                                                                                                                                                                                transport
                                                                                                                                                                                                                                                                                                                                                           The invention relates to human transporters and ion channels (TRICH) and the polynucleotides encoding them. The composition comprising TRICH or agonist of TRICH is useful for treating a disease or condition associated with decreased expression of functional TRICH or condition associated with coverexpression of TRICH respectively. The composition comprising Ab is useful for diagnosing a condition of disease associated with expression of TRICH in a subject, where the disorders include a transport capacition of disease associated with capacition, hyperspecial disorders associated with transport e.g. angina, hypertension, myocarditis, neurological disorders associated with transport e.g. Alzheimer's disease, Wilson's disease, schizophrenia, cataracts, infertility, hypersplycaemia, Grave's disease, schizophrenia, cataracts, infertility, hypersplycaemia, Grave's disease, solitre, addison's disease, Huntington's disease, dementia, multiple sclerosis, bacterial and viral meningitis. TRICH DNA is useful for generating a transcript image of a tissue or cell type, which represents the global pattern of gene expression by a particular tissue or cell type and for analysing the proteome of a tissue or cell type. TRICH DNA is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               63
                                                                                                                                                                                                     Lu DAM;
                                                                                                                                                                                                                                                                                 Polypeptides of human transporters and ion channels, useful for diagnosing, treating or preventing disorders of transport, neurological muscle, immunological and cell proliferative disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                disease,
                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | :||
EDYRQLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERORLELRQLELRARYNLSEGGYEELE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GIPLTLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AFSOCEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WIFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIGAFLNLVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGVGV
                                                                                                                                                                         Tribouley CM
DB, Policky
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GIPLTLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                      Nguyen DB, Po
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 374;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -SMVIHIPEEPRPSRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                           Khan FA,
                                                                                                                                                                         / ML, Tang YT, Khan Fi
MS, Baughn MR, Nguye
C, Lal P, Kearney L,
Patterson C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                52.3%; Score 1100; DB 5; 55.4%; Pred. No. 1.1e-112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ed. No. 1.16
Mismatches
                                                                                                                                                                                                                                                                                                                                      Claim 1; Page 124-125; 150pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Thornton M, Borowsky ML,
Yao MG, Sanjanwala MS,
                                                                                                                                                                             R, Yao MG, Sanjauruseilhamer JJ, Walia NK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        48;
                                                 2000US-0195595P.
2000US-0196872P.
2000US-0199020P.
2000US-0200552P.
2000US-0202348P.
2000US-0203495P.
                         2001WO-US011206
                                                                                                                                                 INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                INCYTE GENOMICS
                                                                                                                                                                                                                                          WPI; 2002-017448/02
N-PSDB; AAD21998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                Greene BD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      374 AA;
                                                                            20-APR-2000;
28-APR-2000;
05-MAY-2000;
11-MAY-2000;
                         06-APR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Simi
                                                   -APR-2000;
18-OCT-2001
                                                                                                                                                                                       Gandhi AR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                (INCX-)
                                                                                                                                                                                                  Yue H,
Lu Y, (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                        Reddy
```

d d

ઠે

셤

ઠે

g

ਠੋ

d

ò

ð

```
356
                                                                                                                                                                                                                                                                               Human; tandem of P domains in a weak inward rectifying potassium channel; TWIK-9; 56115 protein; central nervous system disorder; sleep disorder; Alzheimer's disease; Parkinson's disease; autonomic function disorder Huntington's disease; hypertension; neuropsychiatric disorder depression; schizophrenia; bipolar affective disorder; cardiac-related disorder; learning disorder; cellular proliferation disorder; migration disorder; myocardial infarction; memory disorder; arteriosclerosis; gene therapy;
               -RYKADVPDLQSVCSCTCYRSQD---YGGRSVAPQNSFSAKLAPHYFHSISYK
GVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEHSHS
                                                                         -TLKNSLFPSPISSISPGLHSFTDHQRLMKRRKSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    site"
                                                         -SPGGGGRYSDTPSHPCLCSGTQRSAISSVSTGLHSLAAFRGLMKRRSSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    phosphorylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Casein kinase II phosphorylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            II phosphorylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      phosphorylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Casein kinase II phosphorylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TWIK-9 protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Transmembrane domain 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Transmembrane domain 2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "N-myristoylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "N-myristoylation site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       domain
                                                                                                                                                                                                                                                                                                                                                                                      myocardial infarction; memory disorder; artamnesia; pain disorder; cancer; prophylaxis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .153
= "N-myristoylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "N-myristoylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ΙI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "N-myristoylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             56
= "N-glycosylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .24
/label= Signal_peptide
9. .26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Casein kinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Casein kinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Casein kinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                 Z
                                                                                                                                                               374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "P-loop"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "P-100p"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Mature
                                                                                                                                                               AAE22989 standard; protein;
                                                                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note=
319. .3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .jr
/note=
55. fo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .48. .1
'note≕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               36. .2
/note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9. .26
/note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   note
                                                                                                                                                                                                                                                      protein
                                                                                                                                                                                                                        (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02
                                                                                      IEEISPS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Modified-site
                                                                                                                                                                                                                                                      TWIK-9
                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                        21-AUG-2002
```

site"

C phosphorylation

"Protein kinase

/note=

.rag

S 1 3 48 i g m S

σ 0

пB

```
(first
                                                                                                  IEEISPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TWIK-7,
                                                                                                                                                                                                                                                                                                                           US2003165891-A1
                                                                                                                                                                                                                                                                                                                                                                                         29-FEB-2000;
03-MAR-2000;
07-APR-2000;
11-APR-2000;
26-APR-2000;
25-SEP-2000;
25-SEP-2000;
18-DEC-2000;
18-DEC-2000;
18-DEC-2000;
18-DEC-2000;
18-DEC-2000;
28-FEB-2001;
06-APR-2001;
11-APR-2001;
25-SEP-2001;
25-SEP-2001;
                                                                                                                                                                                                                         TWIK-9
                                                                                                                                                                                                                                                                                                      sapiens
                                                                                                                                                                                                                                                                                                                                                                      15-MAY-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RAJ,
                                                                                                                                                                                                   6-MAY-2004
                                                                                                                                                                                                                                                                                                                                                 04-SEP-2003
                                 301
                                                                                                  334
                                                                                                                                                         AD127948
            244
                                                       285
                                                                             57
                                                                                                                                                                               ADI27948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (MILL-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Curtis
                                                                                                                                                                                                                         Human
                                                                                                                                                                                                                                                                                                      Homo
                                                                                                                                    RESULT 15
                                                                                                                                              AD127948
                                                                                                                                                                              a
                                                                                                  셤
                                 ð
                                                                            ð
                                                                                                                                                                                                                                                                                                                                           The invention relates to human tandem of P domains in a weak inward
rectifying potassium channel polypeptides (TWIK-9) termed 56115 and
nucleic acid molecules encoding such polypeptides. Sequences of the
invention are useful for treating TWIK-9-associated or related disorders
c nucleic acid molecules encoding such polypeptides. Sequences of the
invention are useful for treating TWIK-9-associated or related disorders
c nucleic acid molecules encoding such polypeptides or related disorders
c e.g. Alzheimer's disease,
c e.g. Alzheimer's disorders
c depression, schizophrenia), learning or memory disorders (e.g.
c depression, schizophrenia), learning or memory disorders (e.g.
c arteriosclerosis, myocardial infarction), pain disorders (e.g.
c proliferation, growth, differentiation or migration disorders (e.g.
c proliferation, growth, differentiation or migration disorders (e.g.
c cancer) and disorders of tissues in which TWIK-9 protein is predominantly
c expressed. They are also useful in screening assays, detection assays
(e.g. chromosomal mapping, tissue typing, forensic biology), predictive
medicine (e.g., diagnostic assays, prognostic assays, monitoring clinical
trials and pharmacogenomics) and in methods of treatment (e.g.
therapeutic and prophylactic). TWIK-9 polynucleotides are used in gene
therapy. The present sequence is human TWIK-9 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                           nervous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GIPLTLI
||||||:
GIPLTLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGYEELE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AFSOCEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AFLNLVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGVGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EDYROLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WSFFHAYYYCFITLTTIGFGDYVALQTKGALQKKPLYVAFSFMYILVGLTVIGAFLNLVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                               tandem of P domains in weak inward rectifying solypeptide, 56115, useful for treating central nat, pain, and cellular proliferation disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C phosphorylation site"
                                                                            dependent protein kinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIG
           C phosphorylation site"
                                                       II phosphorylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 374;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ) DB 5;
L.le-112;
nes 86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 1100; DI
Pred. No. 1.1e
8; Mismatches
131. .333
note= "Protein kinase
                                "Protein kinase
                                                      "Casein kinase
                                                                    370. .373
/note= "cAMP and cGMP
phosphorylation site"
                                                                                                                                                                                                                                                                                                                           2; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         48;
                                                                                                                                                                                                                                                                                       um channel polypeptide, cardiovascular, pain,
                                                                                                                                                                              2000US-0235059P.
                                                                                                                                                         2001WO-US030048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 55.4%;
Matches 229; Conservative
             P1
/note= "Pr'
360.
                                                                .373
                                                                                                                                                                                                  (MILL-) MILLENNIUM PHARM
                                                      /note=
370..3
                                                                                                                                                                                                                                              2002-416481/44
                                                                                                                                                                                                                                                                              New isolated human
                                                                                                                                                                                                                                                         N-PSDB; AAD36247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               374 AA;
                                                                                                            WO200226983-A2
                                                                                                                                                                                                                                                                                                                         Fig
                      Modified-site
                                           Modified-site
                                                                 Modified-site
                                                                                                                                                                              25-SEP-2000;
                                                                                                                                                       25-SEP-2001;
                                                                                                                                  04-APR-2002
                                                                                                                                                                                                                         Curtis RAJ;
                                                                                                                                                                                                                                                                                                                           Claim 13;
                                                                                                                                                                                                                                                                                           potassium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        184
                                                                                                                                                                                                                                                                                                     system,
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
```

```
and
                                                                                                                    333
                                                                        356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; TWIK-9; ion channel family; ICF; cancer; leukaemia; Alzheimer's disease; Parkinson's disease; multiple sclerosis; epilepsy hepatic disorder; cardiovascular disorder; cytostatic; neuroprotective nootropic; antiparkinsonian; hepatotropic; cardiovascular.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TWIK-6, TWIK-7, IC23927, TWIK-8, IC47611, IC47615, HNMDA-1, TWIK-9, alpha2delta-4, 54414, or 53763 nucleic acids and proteins, useful for preventing, diagnosing and treating e.g. cancers, Alzheimer's disease cardiovascular disorders.
                                                                                                               -YGGRSVAPQNSFSAKLAPHYFHSISYK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to TWIK-6, TWIK-7, IC23927, TWIK-8, IC47611, IC47615, HNMDA-1, TWIK-9, alpha-2delta-4, 54414 and 53763 ion channel family (ICF) nucleic acids and proteins. The TWIK-6, TWIK-7, IC23927,
                                                                                                                                                                                                               374
                                                                        GVGGSGFRNVYAEVLHFOSMCSCLWYKSREKLOYSIPMIIPRDLSTSDTCVEHSHS
                                                                                                                                                                                             -TLKNSLFPSPISSISPGLHSFTDHQRLMKRRKSV
                                                                                                                                                                     SSVSTGLHSLAAFRGLMKRRSSV
                       -SMVIHIPEEPRPSRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Silos-Santiago
                                                                                               SPGGGGRYSDTPSHPCLCSGTQRSAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 11; SEQ ID NO 41; 638pp; English
$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-00515520.

2000US-0185938P.

2000US-0195734P.

2000US-0195734P.

2000US-0195734P.

2000US-0195799P.

2000US-0235018P.

2000US-0235018P.

2000US-0235018P.

2000US-0235059P.

2000US-0235059P.

2001US-00796720.

2001US-00828035.

2001US-00843128.

2001US-00843128.

2001US-00964252.

2001US-00964252.

2001US-00964252.
                                                                                                                                                                                                                                                                                                                                     ന
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2002US-00146733
                                                                                                                                                                                                                                                                                                                                   standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Glucksmann MA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2004-069000/07.
N-PSDB; ADI27947, ADI27949
                                                                                                                                                                                                                                                                                                                                                                                                                               entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MILLENNIUM PHARM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein.
```

.rag

```
TWIK-8, IC47611, IC47615, HNWDA-1, TWIK-9, alpha-2delta-4, 54414 and 53763 ICF nucleic acids and proteins may be used for preventing, diagnosing and treating ICF-related diseases. The sequences may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of ICF proteins or to supplement the activity of ICF proteins. The proteins may also be used as antigens in the production of ICF proteins. The proteins and in assays to identify modulators of ICF protein expression and activity. The antibodies against ICF proteins and in assays to identify modulators of ICF protein expression and activity. The antibodies may be used to regulate ICF protein expression and activity. The antibodies may also be used as diagnostic agents for detecting the presence of ICF proteins in samples (e.g. by immunoassay). The nucleic acids and proteins may be used to prevent, diagnose and treat a wide variety of disorders, e.g. cancers and leukaemia, Alzheimer's disease, Parkinson's disease, multiple and leukaemia, Alzheimer's disease, Parkinson's disease, multiple sequence represents the human TWIK-9 protein of the invention. Note: The sequence data for this patent is also available in electronic format from used used as disease.
```

374 AA; Sequence

GIPLTLI 120 ||||||| |GIPLTLV 123 Ŋ 240 180 300 183 243 284 356 333 FHSISYK ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGGYEELE AFSYYER AFSOCEE WTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIGAFLNLVV LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGVGV Gaps 405 --TLKNSLFPSPISSISPGLHSFTDHQRLMKRRKSV ---SPGGGGRYSDTPSHPCLCSGTQRSAISSVSTGLHSLAAFRGLMKRRSSV MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAA Length 374; -SMVIHIPEEPRPSRP. Indels 52.3%; Score 1100; DB 8; ilarity 55.4%; Pred. No. 1.1e-112; Conservative 48; Mismatches 86; Query Match Best Local Similarity Matches 229; Conser IEEISPS-64 334 М 61 124 4 241 244 301 184 357 181 d <del>Q</del> a 셤 d ò ò 원 ò à ठे ਨੇ ò

22:58:14 2005, Search completed: September 15, Job time: 172 secs

S ı 3

-48

σ 93

σ 0

uB

```
5.1.6
Compugen Ltd
version - 2005
GenCore
(c) 1993
         Copyright
```

model 30 using protein search, OM protein

Secon 21:54:16 2005 September 6 Run

updates/sec (6 ; Search time 26 Sec (without alignments) 1162.803 Million cell

US-09-939-483-5 2105 Title: Perfect

.STGLHSLAAFRGLMKRRSS ENVRTLALIVCTFTYLLVGA. score Sequence:

>

BLOSUM62 Gapop 10.0 table Scoring

0.5 Gapext

513545 segs, 74649064

Searched

513545 hits satisfying chosen parameters o£ number Total

residues

length: 0 length: 2000000000 sed sed DB DB Minimum Maximum

Minimum Match 0% Maximum Match 100% Listing first 45 summaries Post-processing:

Patents Issued Databas

/cgn2\_6/ptodata/1/iaa/5A\_COMB.pep:\*/cgn2\_6/ptodata/1/iaa/5B\_COMB.pep:\*/cgn2\_6/ptodata/1/iaa/6A\_COMB.pep:\*/cgn2\_6/ptodata/1/iaa/6B\_COMB.pep:\*/cgn2\_6/ptodata/1/iaa/PCTUS\_COMB.pep:\*/cgn2\_6/ptodata/1/iaa/backfiles1.pep:\*/ 10 C 4 C 9

No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, derived by analysis of the total score distribution. NO. score gand is Pred

#### SUMMARIES

Description	equence 5, Appli	4, Appl	31,	12, Ap	14, Ap	7001,	736	8, App	6, App	2, App	4, App	6913,	7809,	2, App	83, Ap	2, App	2, App	2, App	2, App	69, Ap	31685,	2, Appl	5, A	5, Appl	81, App	8, A	quence 8, Appl
Des	Š	Š	Š	Se	Se	Š	Š	Š	Š	S	Se	Š	Š	Š	Se	Š	Se	Š	Š	Š	Š	Š	Š	Š	Š	Š	Se
ID	0	-144-914-	-949-016-7	US-09-362-842-12	-842-1	-70	-949-016-736	US-09-144-914-8	-080-	US-09-432-470-2	i	US-09-949-016-6913	US-09-949-016-7809	US-09-236-080-2	-33	US-08-749-816-2	US-09-144-914-2	US-09-561-763-2	-09-431-367B-	-09-362-84	US-09-270-767-31685	US-09-362-842-2	US-09-561-763-5	US-09-431-367B-5	US-09-336-643A-81	US-09-561-763-8	US-09-431-367B-8
DB	6	ო	4	4	4	4	4	ო	m	4	4	4	4	ო	ო	m	ന	4	4	4	4	4	4	4	ന	4	4
Length		Ó	œ	0	9	C		7	Н	σ	σ	-4	4	7	Ч	336	m	499	σ		4	σ	$\boldsymbol{\omega}$	'n	Н	313	313
% Query Match	100.0	86.4	52.3	35.7	16.8	16.7	16.7	16.4	9	16.2	9	9	9	9	9	ъ.	S.	ů.	υ. •	S.	ŝ	4.	4.	4.	Э.	щ	ო
P i	2105	81	20	6	S	52.	•	4	4	4	4	4	4,	S	ന	34.	34.	•	19.	17.	17.	$\boldsymbol{\vdash}$	σ	O)	83.	•	83.
Result No.	1	8	m	4	ß	9	7	8	60	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27

Sequence 4, Appli Sequence 11, Appl Sequence 5, Appli Sequence 2, Appli Sequence 654, Ap Sequence 4, Appli Sequence 67, Appli Sequence 4, Appli Sequence 4, Appli Sequence 4, Appli Sequence 4, Appli Sequence 8, Appli Sequence 3, Appli Sequence 3, Appli Sequence 3, Appli Sequence 6, Appli Sequence 6, Appli Sequence 3, Appli Sequence 6, Appli Sequence 6, Appli
US-08-332-312-4 US-09-561-763-11 US-09-431-367B-11 US-09-362-842-6 US-08-332-312-2 US-09-949-016-6654 US-09-949-016-7794 US-09-362-842-4 US-09-362-842-4 US-09-270-767-45442 US-09-270-767-45442 US-09-362-842-8 US-09-362-842-8 US-09-362-842-8 US-09-362-842-8 US-09-362-842-8 US-09-362-842-8 US-09-362-842-8 US-09-362-842-8 US-09-362-842-8 US-09-362-842-8 US-09-362-842-8 US-09-362-842-8 US-09-362-842-8 US-09-362-842-8 US-09-362-842-8 US-09-362-842-8
336 401 395 618 7273 741 741 1153 383 347 347
111 111 111 110 110 110 110 110 110 110
251 248.5 248.5 248.5 223.5 223.5 217.5 217.5 195 195 148.5 148.5 124
22666666666644444 89012646666644444

## ALIGNMENTS

```
RESULT 1

US-09-144-914-5

Sequence 5, Application US/09144914

Patent No. 6309855

GENERAL INFORMATION:
APPLICANT: Lesage, Florian
APPLICANT: Lazdunski, Michel
ATITLE OF INVENTION: AND THEIR USE, ESPECIALLY FOR THE SCREENING OF DRUGS
TITLE OF INVENTION NUMBER: US/09/144,914
CURRENT FILING DATE: 1998-09-01
BARLIER APPLICATION NUMBER: 60/095,234
BARLIER APPLICATION NUMBER: 60/095,234
BARLIER APPLICATION NUMBER: FR 96/01565
BARLIER APPLICATION NUMBER: 60/095,234
BARLIER FILING DATE: 1998-09-04
BARLIER PILING DATE: 1998-08-04
BARLIER PILING DA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        405;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
100.0%; Score 2105; DB 3;
Best Local Similarity 100.0%; Pred. No. 1.7e-230,
Matches 405; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: TASK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
ORGANISM: Murine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; OTHER INFORM
US-09-144-914-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
```

ö

120

9

9

180

180

240

N

-러

```
; ORGANISM: Human
US-09-949-016-7631
                            T 3
-949-016-7631
                                                                                                                                                                                                            SEQ ID NO 7631
LENGTH: 388
                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                  78
                                                                                                                                                                                                                                                                                                                                                                                                                                          198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           348
                                                                                                                                                                                                                                                                                                                            18
                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                      138
                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        357
                                                                                                                                                                                                                                                                                                          ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                     Query Match
Best Local
Matches 22
                                                                                                                                                                                                                                         ORGANISM:
                                                                                                                                                                                                                                                                      Match
                             RESULT
US-09-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ga
                                                                                                                                                                                                                                                                                                                            ద
                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                                                                           d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
 엄
                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                                                                                                                                    ઠ
300
                   300
                                     360
                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                  2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63
                                                                                                                                                                                                             CLONING
                                                                                                                                                                                                                      OF DRUGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AFSHYEH
                                    ISHSSPGG
|||||||
ISHSSPGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GIPLTLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGGVGV
                 AAGGVGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                  AFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGGVGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GIPLTLV
                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AA-
                                   GVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEH
                                                                                                                                                                                                                                                                                                                                                                                                                                  14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAA
        CHANNELS, THEI
THE SCREENING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            --GGSAHTTĎTASSTÁ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAA
                                                                                                                                                                                                                                                                                                                                                                                                              Length 394;
                                                                           405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   405
                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                         GGRYSDTPSHPCLCSGTQRSAISSVSTGLHSLAAFRGLMKRRSSV
                                                                                                                                                Patent No. 6309855
GENERAL INFORMATION:
APPLICANT: Duprat, Fabrice
APPLICANT: Lesage, Florian
APPLICANT: Lesage, Florian
APPLICANT: Lazdunski, Michel
CURRENT FILIKO NVERER: US/09/144,914
CURRENT APPLICATION NUMBER: US/09/144,914
CURRENT APPLICATION NUMBER: 00/095,234
EARLIER APPLICATION NUMBER: 60/095,234
EARLIER APPLICATION NUMBER: FR 96/01565
EARLIER FILING DATE: 1996-02-08
NUMBER OF SEQ ID NOS: 24
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                              Score 1819; DB 3;
Pred. No. 5.8e-198;
9; Mismatches 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 4, Application US/0914491
Patent No. 6309855
                                                                                                                                                                                                                                                                                                                                                                                                              th 86.4%;
Similarity 88.1%;
57; Conservative
                                                                                                                                                                                                                                                                                                                                                                                   TASK
                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: 09-144-914-4
                                                                                                                                                                                                                                                                                                                                               394
                                                                                                                                 -144-914-4
                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                  241
                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  124
                                     301
                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                292
                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                      D ID NO
                                                                                                                                                                                                                                                                                                                           SOFTWARE:
SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                          EATURE
                  d
                                                       g
                                                                                                                         RECUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                d
ð
                                     ð
                                                                         ò
                                                                                            유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

1

8

ð

ð

```
THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 4
US-09-362-842-12
i Sequence 12, Application US/09362842
j Patent No. 6511824
j GENERAL INFORMATION:
i APPLICANT: Buchman et al.
i TITLE OF INVENTION: CHANNELS AND METHODS OF USE
j FILE REFERENCE: 7326-104
j CURRENT APPLICATION NUMBER: US/09/362,842
j CURRENT FILING DATE: 1999-07-28
j PRIOR APPLICATION NUMBER: 09/270,767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGVGV
                                                                                                                                                                                                                USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEHSHS
                                                                                                                                                                                                                 AND
                                                                                               Sequence 7631, Application US/09949016

Sequence 7631, Application US/09949016

GENERAL INFORMATION:

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND FILE REFERENCE: CL001307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR FILING DATE: 2000-10-20

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     --SPGGGGRYSDTPSHPCLCSGTQRSAISSVSTGLHSLAAFRGLMKRRSSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            - TLKNSLFPSPISSISPGLHSFTDHQRLMKRRKSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  --SMVIHIPEEPRPSRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
GGRYSDTPSRRCLCSGAPRSAISSVSTGLHSLSTFRGLMKRRSSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4;
16;
86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .7e-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 1100; DI
Pred. No. 3.7e-
8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        52.3%;
illarity 55.4%;
Conservative 4%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               il Similarity
229; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IEEISPS-
```

•

```
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-949-016-7368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-949-016-7001
                                                                                                                                                                                                                                                                                                                                                                                                                                                 EQ ID NO 7001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     250
                                                                                                                                           288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            230
                                                                                                                                                                  290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             170
                          122
                                                                       180
                                                                                              232
                                                                                                                      238
                                                                                                                                                                                         313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            73
   112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
                                                                                                                                                                                                                           RESULT
                                                                                             ద
                                                                                                                                         원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <del>a</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   원
                                                ద
                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                     ò
                                                                                                                     ठे
                                                                                                                                                                  ਠੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                178
                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                            298
                                                                                                                                                                                                                                                                                                                                                                   290
                                                                                                                                                                                                                                                                                                                                                                                          332
                                                                                                                                                                                                                                                                                                                                                                                                                 340
                                                                                                                                                                                                                           123
                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                        181
                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TWIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -OWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGIPLTLIM
                                                                                                                                                                                                                                                                                             ----EAQAMQALQVAVKLEGDVITSNGSILSGYEGHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13 FTYLLVGAAVFDALESEPEMIERQRLELR-QLELRARYNLSEGGYEELERVVLRLKPHKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             :| ::
--IVEIVRANNR
                                                                                                                                                      ENVRILALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGGYEELE
                                                                                                                                                                                                               64 TVVLKSESHKAGQQWKFTGAFYYATTVLTTIGYGHSTPSTVGGKLFTMCYAIVGIPLGLV
                                                                                                                                                                                                                                                              VVLRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGV
                                                                                                                                                                                                                                                                                                                                                                                          --LWYKSREK---L
                                                                                                                                                                 RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGIPLTLI
                                                                                                                                                                                                                                                 MFOSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCI--GAAAFSYY
                                                                                                                                                                                                                                                                                                                                                                                                                 -NISSMCSCHCICLNGNRHKKSSNLEKNNDAENQYKLRQSPTHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ::
                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          et al.
NUCLEIC ACIDS AND POLYPEPTIDES OF INVERTEBRATE
CHANNELS AND METHODS OF USE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        :99
                                                                                                        408;
                                                                                                                                  53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 361;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ..
—
                                                                                                       Score 752.5; DB 4;
Pred. No. 1.4e-76;
9; Mismatches 103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16.8%; Score 354; DB 4; larity 30.7%; Pred. No. 2.6e-31 Conservative 53; Mismatches 11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         359
                                                                                                                                                                                                                                                                                                                                                                                                                                                              369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILE REFERENCE: 7326-104
CURRENT APPLICATION NUMBER: US/09/362,842
CURRENT FILING DATE: 1999-07-28
PRIOR APPLICATION NUMBER: 09/270,767
PRIOR FILING DATE: 1999-03-17
NUMBER OF SEQ ID NOS: 70
SOFTWARE: Patentin Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                        QYSIPMIIP-RDLSTS-DTCVEHSHSSPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                     :::|::|:||:||:||:||
RHLLPEVVPMQDLNYDYDTQSLHTLADRG
                                                                                                                                                                                                                                                                                                                                                                                          GVGVGGSGFRNVYAEVLHFQSMCSC--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Leptinotarsa decemlineata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 14, Application US/09362842
Patent No. 6511824
GENERAL INFORMATION:
APPLICANT: Buchman et al.
TITLE OF INVENTION: CHANNELS AND MI
                                                                    ; ORGANISM: Drosophila melanogaster
US-09-362-842-12
                                                                                                                              69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      53;
                                                                                                       / Match
Local Similarity 42.2%;
les 164; Conservative
   -03-1
                                                                                                                                                                                                                                                                                                                                                                    LVLRFVTMNTEDERRD-
PRIOR FILING DATE: 1999-(
NUMBER OF SEQ ID NOS: 70
SOFTWARE: Patentin Ver. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            l Similarity
102; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                 GOSLINGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş—
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ID NO 14
ENGTH: 361
                                    SEQ ID NO 12
LENGTH: 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             72
                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                        124
                                                                                                                                                                                                                                                                                                                                                                    242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT
                                                            TYPE: PRT
                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                          299
                                                                                                                                                                                                                                                                                                                                                                                                                 291
                                                                                                                                                                                                                                                                                                                                                                                                                                        333
                                                                                                                                                                                                                                                                                                                      182
                                                                                                                                                                                                                                                                                                                                             239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                341
                                                                                                                                                                                                                                                                                               179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH:
                                                                                                                  Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                            В
                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                       ठ
                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                              요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
```

THEREOF 8 169 312 129 189 308 287 289 237 179 6 LALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLE-LRARYNLSEGGYEELERVVL -RWIFFQAYYYCFITLITIGFGDYVALQKDQALQT-QPQYVAFSFVYILTGLTVIGAFLN :| ||: :|| |: | |: | |: | |: | | |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: || |: 113 LGIPLTLIMFQSLGERINTFVRYLLHRAK---RGLGMRHAEVSMANMVLIGFVSCISTLC IGAAAFSYYERWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGL GVSAIENATSEPNWSFGQSFFFASTVITTIGYGHVTPLSRNGKLFCMFYAVVGIPLTLVL FOSLGERINTFVRYLLH--RAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYE -LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPV ASSOCIATED
OF DETECTION AND USES Gaps 27; 538 Length Indels APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASS
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF
FILE REFERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0 | |::: || : | : | 309 AYFAAVLSMIGDWLRVLSKKTKEEVGEIKAHAAEWKANVT. --AEHRALLT Score 352.5; DB 4; Pred. No. 7.2e-31; ; Mismatches 110; |:: |: | | | | SEGPGLQYGAGFSPHNEDNIHRQVVRVRS TCAAAAGGVGVGVGGSGFR--NVYAEVLHFQS TVIGAFLNLV--VLRFMTMNAEDEKRD---Sequence 7368, Application US/09949016 Patent No. 6812339 .09-949-016-7001 equence 7001, Application US/0994901 atent No. 6812339 LTVFYDIPQLNLGLLFTTSEDSEK-53; 16.7%; 32.1%; Conservative Similarity 90; Conser Sequence 7001, Applipatent No. 6812339
GENERAL INFORMATION: LW---

--

.ra

.5

939-483

- 09

```
; OTHER INFORMATION: TREK-1
US-09-144-914-8
                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 9
US-09-236-080-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 90
                                             Query Match
Best Local S
Matches 90
                                                                                                                                                                                                                                                                        155
                                                                                                                                                                                                                                                                                                                               215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  215
                                                                                                                                45
                                                                                                                                                                                                                                             159
                                                                                                                                                                                                                                                                                                   210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             268
                                                                                                                                                            28
                                                                                                                                                                                                                  107
                                                                                                                                                                                                                                                                                                                                                          268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       d
                                                                                                                                                                                      d
                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \delta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                               d
                                                                                                                                                            ð
                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                     ठ
                                                                                                                                                                                                                                                                                                                                œ
                                                                                                                                                                                                                                                                                                                                                                                                                                           209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IR CLONING
OF DRUGS
                                                                                                                                                                                                                                                                                                                                                                           ||| ::
ELETLIQ
                                                                                                                                                                                                                                                                                                                                                       ELERVVL
                                                                                                                                                                                                                                                                                                                                                                                                             VYILTGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LGIPLTLIMFQSLGERINTFVRYLLHRAK---RGLGMRHAEVSMANMVLIGFVSCISTLC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ||||| : :|:::| : || : || : | : | EGIPLFGFLLAGIGDQLGTIFGKSIARVEKVFRKKQVSQTKIRVISTILFILAGCIVFVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FWILVGL
                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Duprat, Fabrice
APPLICANT: Lesage, Florian
APPLICANT: Lesadunski, Michel
APPLICANT: Lazdunski, Michel
APPLICANT: Lazdunski, Michel
APPLICANT: Lazdunski, Michel
TITLE OF INVENTION: FAMILY OF MAMMALIAN POTASSIUM CHANNELS, THEIR CLOI
TITLE OF INVENTION: AND THEIR USE, ESPECIALLY FOR THE SCREENING OF DRI
FILE REFERENCE: 989.6705CIP
CURRENT APPLICATION NUMBER: US/09/144,914
CURRENT FILING DATE: 1998-09-01
EARLIER APPLICATION NUMBER: 60/095,234
EARLIER FILING DATE: 1998-08-04
EARLIER FILING DATE: 1998-08-04
EARLIER FILING DATE: 1996-02-08
NUMBER OF SEQ ID NOS: 24
SOFTWARE: Patentin Ver. 2.0
                                             AND
           APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND
FILE REFERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 7368
LENGTH: 558
TYPE: PRT
                                                                                                                                                                                                                                                                                                                              27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          - LRARYNLSEGGYE
                                                                                                                                                                                                                                                                                                                                                                          Length 558;
                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | | : : : | | : | | : | | AYFAAVLSMIGDWLRVLSKKTKEEVGEIKAHAAEWKANVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TVIGAFLNLV--VLRFMTMNAEDEKRD----AEHRALLT
                                                                                                                                                                                                                                                                                                Score 352.5; DB 4;
Pred. No. 7.6e-31;
53; Mismatches 110;
                                                                                                                                                                                                                                                                                                                                                         6 LALIVCIFIYLLVGAAVFDALESEPEMIERQRLELRQLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 8, Application US/09144914
Patent No. 6309855
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                            53;
                                                                                                                                                                                                                                                                                                 16.7%;
milarity 32.1%;
Conservative 5
                                                                                                                                                                                                                                                                                                               Similarity
90; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rYPE: PRT
ORGANISM: Murine
FEATURE:
                                                                                                                                                                                                                                                         ORGANISM: Human
19-949-016-7368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EQ ID NO 8
LENGTH: 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -09-144-914-8
                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              329
                                                                                                                                                                                                                                                                                                                                                                                  පු
                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
```

```
10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       214
                                                                                                            101
                                                                                                                                           106
                                                                                                                                                                          158
                                                                                                                                                                                                         154
                                                                                                                                                                                                                                       209
                                                                                                                                                                                                                                                                      214
                                                                            57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NMVLIGEVSCISTLCIGAAAFSYYERWTFFQAYYYCFITLTTIGFGDYVALQKDQALOTQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STIFILFGCVLFVALPAVIFKHIEGWSALDAIYFVVITLTTIGFGDYVAGGSD--IEYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          --NTFVRYLLHRAKRGLGMRHAEVSMA
                                                                                               -OWRFAGSFYFAITVITTIGYGHAAPSTDGGKVF
                                                                                                                                                         -- OWRFAGSFYFAITVITTIGYGHAAPSTDGGKVF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ----IRII
                                                                            ENVRILALIVCTFTYLLVGAAVFDALESEPEMIERORLELROLELRARY - - - NLSEGGYE
                                                                                                                                                                                                         -NTFVRYLLHRAKRGLGMRHAEVSMA
                                                                                                                                                                                                                                                                      NMVLIGFVSCISTLCIGAAAFSYYERWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARY---NLSEGGYE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   320
                                                                                                                                                                                                                                                                                                                                                                 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POYVAFSFVYILTGLTVIGAFLNLV--VLRFMTMNAEDEKRD-AEHRALLTHN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POYVAFSFVYILTGLTVIGAFLNLV--VLRFMTMNAEDEKRD-AEHRALLTHN
                                                                                                                                                                                                                                                                                                                                                    46;
                                               46;
               370;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |: ||||||||| : :|:: :| | CIIYALLGIPLFGFLLAGVGDQLGTIFGKGIAKVEDTFIKWNVSQTK---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 411;
                                                                                                                                                                                                                          |: |||||||| : :|:: :| :| CIIYALLGIPLEGFLLAGVGDQLGTIFGKGIAKVEDTFIKWNVSQTK-
                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                Length
; DB 3; Le
2.2e-30;
96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 h 16.4%; Score 345; DB 3; 1 Similarity 30.7%; Pred. No. 3.4e-30; 90; Conservative 61; Mismatches 96;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 6, Application US/09236080; Patent No. 6242217; GENERAL INFORMATION:
APPLICANT: Helen Meadows
APPLICANT: Conrad Chapman; TITLE OF INVENTION: No. 6242217el Compounds; FILE REFERENCE: GP30031
CURRENT APPLICATION NUMBER: US/09/236,080; CURRENT FILING DATE: 1999-01-25
NUMBER OF SEQ ID NOS: 6
SOFTWARE: FastSEQ for Windows Version 3.0
                                             Mismatches
                Score 346;
Pred. No.
                                                                                                                                                                                                         CMFYALLGIPLTLIMFQSLGERI-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CMFYALLGIPLTLIMFOSLGERI
                                            61;
               16.4%;
ilarity 30.7%;
Conservative 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ELERVVLRLKPHKAGV--
                                                                                                                                            ELERVVLRLKPHKAGV--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT ORGANISM: Mus musculus -09-236-080-6
                          l Similarity
90; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFIWALL SEQ ID NO 6
```

.rai

S

```
-09-949-016-6913
                                                                                                                                                                 67
                                                                                                                                                                                                                                                                                                                  159
                                                                                                                                                                                                                                                                                                                                                                                                                                                               233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  150
                                                                                                                     54
                                                                                                                                                                                                                                                                                                                                                                                                                 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           259
                       9
                                                                                                                                                                                                                    111
                                                                                                                                                                                                                                                                  124
                                                                                                                                                                                                                                                                                                                                                               175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
                                                                                                                                                                 d
                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           d
                                                                    셤
                                                                                                                    ò
                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <del>Q</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>|</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SMANMVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ODSPAYO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |||: || : || || || || || || climatede | companie | comp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IGFVSCISTLCIGAAAFSYYERWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  --GGYEELERVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |: | | : : : |
----GIGHIEAIFLKWHVPPELVRVLSAML
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LALIVCTFTYLLVGAAVFDALESEPE-MIERQRLELRQLELRARYNLSE--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 393;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ALLGIPLTLIMFOSLGERINTFVRYLLHRAKRGLGMRHAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     , DB 4;
8.9e-30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     341; DB 4;
No. 8.9e-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 341; DB Pred. No. 8.9e 42; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 4, Application US/09432470

Patent No. 6426197

GENERAL INFORMATION:

APPLICANT: David Malcolm Duckworth

APPLICANT: Conrad Gerald Chapman

TITLE OF INVENTION: NOVEL COMPOUNDS

FILE REFERENCE: GP-30190

CURRENT APPLICATION NUMBER: US/09/432,470

CURRENT FILING DATE: 1999-11-03

EARLIER APPLICATION NUMBER: UK 9923668.9

EARLIER FILING DATE: 1999-10-07

EARLIER FILING DATE: 1998-11-03

NUMBER OF SEQ ID NOS: 4

SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ---LTVIGAFLNLVVLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PLVWFWILLGLAYFASVLTTIGNWLRVVSRR
                                                                                                                                                                                                                                                                                                                                                              3.0
                                                                                                                                                                                          US/09/432,470
                                                         GENERAL INFORMATION:

APPLICANT: David Malcolm Duckworth
APPLICANT: Conrad Gerald Chapman
TITLE OF INVENTION: NOVEL COMPOUNDS
FILE REFERENCE: GP-30190
CURRENT APPLICATION NUMBER: US/09/432,470
CURRENT FILING DATE: 1999-11-03
EARLIER APPLICATION NUMBER: UK 9824048.4
EARLIER FILING DATE: 1998-11-03
NUMBER OF SEQ ID NOS: 4
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                          6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ||:|||| |: :|:|: :|:
ALVGIPLFGILLAGVGDRLGSSLRH---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score
Pred.
                    Sequence 2, Application US/09432470 Patent No. 6426197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 th 16.2%;
Similarity 33.2%;
90; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16.2%;
larity 33.2%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                               HOMO SAPIENS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HOMO SAPIENS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AFSFVYILTG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 93
                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 2
LENGTH: 393
-432-470-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-432-470-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-432-470-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   111
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -09-432-470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ದ್ದ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
```

ð

```
7
                                                                                                                                                                                                                                                                                                                                            158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-949-016-6913

// Sequence 6913, Application US/09949016

// Patent No. 6812339

// GENERAL INFORMATION:

// APPLICANT: VENTER, J. Craig et al.

// TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEF

// TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEF

// TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEF

// CURRENT APPLICATION NUMBER: US/09/949,016

// CURRENT FILING DATE: 2000-04-14

// PRIOR FILING DATE: 2000-10-03

// PRIOR FILING DATE: 2000-10-03

// PRIOR FILING DATE: 2000-09-08

// NUMBER OF SEQ ID NOS: 207012

// SEQ ID NO 6913

// LENGTH: 419
                                                                              99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IGFVSCISTLCIGAAAFSYYERWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -VSMANMVL
                                                                                                                                                                                                                                                                                                                                                                                             ----GIGHIEAIFLKWHVPPELVRVLSAML
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      --VSMANMVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |: | | : : : |
----GIGHIEAIFLKWHVPPELVRVLSAML
                                  |||: ||: || || || || :|: |:|: || :|: |:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ||||: ||| || || || || || 33 LALLALVLYLVSGALVFRALEQPHEQQAQRELGEVREKFLRAHPCVSDQELGLLIKEVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ---GGYEELERVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LALIVCTFTYLLVGAAVFDALESEPE-MIERORLELROLELRARYNLSE-
LALIVCTFTYLLVGAAVFDALESEPE-MIBRORLELROLELRARYNLSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                         ALLGIPLTLIMFOSLGERINTFVRYLLHRAKRGLGMRHAE--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ALLGIPLTLIMFQSLGERINTFVRYLLHRAKRGLGMRHAE--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 341; DB 4;
Pred. No. 9.9e-30
2; Mismatches 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               --LTVIGAFLNLVVLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PLVWFWILLGLAYFASVLTTIGNWLRVVSRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ||:|||| |: :|: :|:
ALVGIPLFGILLAGVGDRLGSSLRH----
                                                                                                                                                                                                                                                                                                                                                                                           ||:|||| |: :|:|: :|:
ALVGIPLFGILLAGVGDRLGSSLRH-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16.2%;
illarity 33.2%;
Conservative 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AFSFVYILTG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 90; Conser
```

rai

.5

```
US-09-336-643A-83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT ORGANISM:
                                                                                                                                                                                                     217
                                                                                                                                                                                                                                270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   109
               45
                                                                   101
                                                                                             109
                                                                                                                        161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      270
                                         61
                                                                                                                                                                            212
                                                                                                                                                                                                                                                                         SULT 15
                                                                                                                                                                            d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <del>Q</del>
                                                                   ద
                                                                                                                      d
                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                         ò
                                                                                              ð
                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                 THEREOF
                                                                                                                                                                                                                                                                                                                                                      7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6
                                                                                                                                                                                                                                                                                                                                                                                                                                   110
                                                                                                                                                                                                                                                                                                                                                                                                                                                               170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IGEVSCISTLCIGAAAFSYYERWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ODSPAYO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SMANMVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |: | | : : |
----GIGHIEAIFLKWHVPPELVRVLSAML
                                                                                                                                                                                                                                                                                                                                                                                                          LLIKEVA
                                                                                                                                                                                                                                                                                                                                                                                                                                     KVFCMFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                             RLFCIFY
                                                                                 USES
                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                  APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND
                                                                                                                                                                                                                                                                                                                                                                                                        54 LALLALVLLYLVSGALVFRALEOPHEOQAQRELGEVREKFLRAHPCVSDQELGI
                                                                                                                                                                                                                                                                                                                                                     48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  42;
                                                                                                                                                                                                                                                                                                                                                                                                                                     -GGYEELERVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            440;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             411;
                                                                                                                                                                                                                                                                                                                                                                                LALIVCTFTYLLVGAAVFDALESEPE-MIERQRLELRQLELRARYNLSE
                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indel
                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ALLGI PLTLIMFQSLGERINTFVRYLLHRAKRGLGMRHAE-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 337; DB 3; Pred. No. 2.7e-29; 62; Mismatches 101;
                                                                                                                                                                                                                                                                                                                                ۰- o
                                                                                                                                                                                                                                                                                                                            Score 341; DB 4
Pred. No. 1.1e-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 242
                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  --LTVIGAFLNLVVLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PLVWFWILLGLAYFASVLTTIGNWLRVVSRR
                                                                             TITLE OF INVENTION.
FILE REFERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-20
                                                                                                                                                                                                                                 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/236,080
CURRENT FILING DATE: 1999-01-25
NUMBER OF SEQ ID NOS: 6
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ||:|||| |: :|: :|:
ALVGIPLFGILLAGVGDRLGSSLRH----
                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.
SEQ ID NO 7809
LENGTH: 440
            Sequence 7809, Application US/09949016
Patent No. 6812339
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 2, Application US/09236080; Patent No. 6242217; GENERAL INFORMATION:
APPLICANT: Helen Meadows; APPLICANT: Conrad Chapman; TITLE OF INVENTION: No. 6242217el Con; FILE REFERENCE: GP30031
                                                                                                                                                                                                                                                                                                                                                    42;
                                                                                                                                                                                                                                                                                                                           16.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           th Similarity 29.6%; 86; Conservative
                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Homo sapiens -09-236-080-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AFSFVYILTG--
                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                     ; ORGANISM: Human
US-09-949-016-7809
-09-949-016-7809
                                                                                                                                                                                                                                                                                                                                                   90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -09-236-080-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q ID NO 2
LENGTH: 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 86
                                                                                                                                                                                                                                                                                                                                                                                                                                     54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 219
                                                                                                                                                                                                                                                                                                                                                                                ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            280
                                                                                                                                                                                                                                                                                                                             Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT
                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
Matches 9
                                                                                                                                                                                                                                                                                                                                                                                                         පු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ठे
                                                                                                                                                                                                                                                                                                                                                                                ठे
```

ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGGYEELE

Н

ઠે

```
ω
::
                                                                                                                                    156
                                                                                                                                                                                                            216
                                                                                                                                                                                                                                                269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       269
--NTFVRYLLHRAKRGLGMRHAEVSMANM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCM
                                                                                                                                    --NTFVRYLLHRAKRGLGMRHAEVSMANM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ELIQQIVAAINAGIIPLGNTSNQISHWDLGSSFFFAGTVITTIGFGNISPRTEGGKIPCI
                                                                            -IRIIST
                                                                                                                                                                                                           VLIGEVSCISTLCIGAAAFSYYERWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -OWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VLIGEVSCISTLCIGAAAFSYYERWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQ
                                                                                                                                                                                                                              ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERORLELROLELRARYNLSEGGYEELE
                                                                                                                                                                                                                                                                                                                          320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 320
                                                                                                                                                                                                                                                                                     YVAFSFVYILTGLTVIGAFLNLV--VLRFMTMNAEDEKRD-AEHRALLTHN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YVAFSFVYILTGLTVIGAFLNLV--VLRFMTMNAEDEKRD-AEHRALLTHN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | : :|| || || || || XKPVVWFWILVGLAYFAAVLSMIGDWLRVISKKTKEEVGEFRAHAAEWTAN
                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 83, Application US/09336643A;
Sequence 83, Application US/09336643A;
Patent No. 6399761
GENERAL INFORMATION:
APPLICANT: Miller, Andrew P.
APPLICANT: Curran, Mark Edward
APPLICANT: Hu, Ping
APPLICANT: Wang, Jian-Wang
TITLE OF INVENTION: No. 6399761el Human Potassium Channels
FILE REFERENCE: SEQ-15P
CURRENT APPLICATION NUMBER: US/09/336,643A;
CURRENT FILING DATE: 1999-06-18
PRIOR FILING DATE: 1999-01-19
PRIOR FILING DATE: 1999-01-19
PRIOR FILING DATE: 1999-01-19
PRIOR FILING DATE: 1999-01-19
PRIOR FILING DATE: 1999-02-22
NUMBER OF SEQ ID NOS: 87
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 411;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                         -29;
101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 337; DB 3
Pred. No. 2.7e-2
2; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FYALLGIPLTLIMFQSLGERI--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62;
                                                                                                                                    FYALLGIPLTLIMFOSLGERI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 29.6%;
Matches 86; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RVVLRL-KPHKAGV---
                                                         RVVLRL-KPHKAGV-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens
```

Search completed: September 15, 2005, 22:40:27 Job time : 32 secs

us-09-939-483-5.rai

This Page Blank (uspto)

```
5.1.6
Compugen Ltd
version - 2005
GenCore
(c) 1993
        Copyright
```

model **3** using search, protein OM protein

Seconda 22:40:25 2005, 15, September ü ü

Run

updates/sec (without alignments) (without alignments) 970.389 Million cell

. STGLHSLAAFRGLMKRRSSV ENVRTLALIVCTFTYLLVGA. US-09-939-483-5 2105 score: Sequence: Title: Perfect

405

BLOSUM62 Gapop 10.0 table: Scoring

residues 404927589 0.5 Gapext 1812044 seqs, • Searched:

1812044 hits satisfying chosen parameters: οĘ number Total

Minimum DB Maximum DB

2000000000 length: length: seq seq

45 summaries 0**%** 100**%** Minimum Match ( Maximum Match 1 Listing first Post-processing:

Database

Published Applications AA:\*

1: /cgn2\_6/ptodata/1/pubpaa/USO7\_PUBCOMB.pep:\*
2: /cgn2\_6/ptodata/1/pubpaa/USO6\_NEW\_PUB.pep:\*
3: /cgn2\_6/ptodata/1/pubpaa/USO6\_PUBGOMB.pep:\*
4: /cgn2\_6/ptodata/1/pubpaa/USO6\_PUBGOMB.pep:\*
5: /cgn2\_6/ptodata/1/pubpaa/USO8\_NEW\_PUB.pep:\*
6: /cgn2\_6/ptodata/1/pubpaa/USO8\_PUBCOMB.pep:\*
7: /cgn2\_6/ptodata/1/pubpaa/USO8\_PUBCOMB.pep:\*
8: /cgn2\_6/ptodata/1/pubpaa/USO9A\_PUBCOMB.pep:\*
10: /cgn2\_6/ptodata/1/pubpaa/USO9A\_PUBCOMB.pep:\*
11: /cgn2\_6/ptodata/1/pubpaa/USO9A\_PUBCOMB.pep:\*
12: /cgn2\_6/ptodata/1/pubpaa/USO9A\_PUBCOMB.pep:\*
13: /cgn2\_6/ptodata/1/pubpaa/USO9B\_PUBCOMB.pep:\*
14: /cgn2\_6/ptodata/1/pubpaa/USO0B\_PUBCOMB.pep:\*
15: /cgn2\_6/ptodata/1/pubpaa/USO0B\_PUBCOMB.pep:\*
16: /cgn2\_6/ptodata/1/pubpaa/USO0B\_PUBCOMB.pep:\*
17: /cgn2\_6/ptodata/1/pubpaa/USO0B\_PUBCOMB.pep:\*
16: /cgn2\_6/ptodata/1/pubpaa/USOOB\_PUBCOMB.pep:\*
17: /cgn2\_6/ptodata/1/pubpaa/USOOB\_PUBCOMB.pep:\*
18: /cgn2\_6/ptodata/1/pubpaa/USOOB\_PUBCOMB.pep:\*
19: /cgn2\_6/ptodata/1/pubpaa/USOOB\_PUBCOMB.pep:\*
17: /cgn2\_6/ptodata/1/pubpaa/USOOB\_PUBCOMB.pep:\*
18: /cgn2\_6/ptodata/1/pubpaa/USOOB\_PUBCOMB.pep:\*
19: /cgn2\_6/ptodata/1/pubpaa/USOOB\_PUBCOMB.pep:\*
17: /cgn2\_6/ptodata/1/pubpaa/USOOB\_PUBCOMB.pep:\*
18: /cgn2\_6/ptodata/1/pubpaa/USOOB\_PUBCOMB.pep:\*
19: /cgn2\_6/ptodata/1/pubpaa/USOOB\_PUBCOMB.pep:\*
19: /cgn2\_6/ptodata/1/pubpaa/USOOB\_PUBCOMB.pep:\*
20: /cgn2\_6/ptodata/1/pubpaa/USOOB\_PUBCOMB.pep:\*
21: /cgn2\_6/ptodata/1/pubpaa/USOOB\_PUBCOMB.pep:\*
22: /cgn2\_6/ptodata/1/pubpaa/USOOB\_PUBCOMB.pep:\* 

No. is the number of results predicted by chance to have greater than or equal to the score of the result being a derived by analysis of the total score distribution. score gand is Pred.

### SUMMARIES

ption	Seguence 5, Appli	'n	6	4	•	15	1	Ä	9	Sequence 5724, Ap	α
Descr	Segu	Sedu	Seg	Sequ	Sequ	Sedu	Seg	Sed	Sed	Seg	Sed
ID	US-09-939-484-5	US-09-939-483-5	US-10-146-733-9	US-09-939-484-4	US-09-939-483-4	US-09-798-584-15	US-10-146-733-17	US-10-146-733-18	US-10-820-474A-68	US-10-756-149-5724	US-10-146-733-8
DB	ე	σ	14	σ	σ	σ	14	14	18	18	14
Length DB	405	405	412	394	394	394	394	394	394	394	395
Query Match	0 .	。	α	86.4	9	9	9	9	9	9	9
ore	210	10	'n.	1819	81	81	81	81	81	81	81
Result No.		7	m	4	Ŋ	9	7	œ	σ	10	11

	Sequence 41, Ap Sequence 6, App Sequence 194, A Sequence 195, A	60, App 59, App 42, Ap 192, A	equence 193, equence 5, A quence 58, A equence 191, equence 76,	quence 22, Appequence 2, Appequence 13, Apequence 59632, quence 34389,	24, App 216417, 10, App 74, App 129, Ap	
8 US-08-816-011-55 17 US-10-870-492-55 9 US-09-746-491-61 15 US-10-459-190-15 9 US-09-798-584-1	4 US-10-146-733- 5 US-10-257-022- 5 US-10-074-978A 5 US-10-074-978A	US-09-746-491-6 US-09-746-491-5 S US-10-173-999-5 US-10-074-978A	4 US-10-0/4-9/8A-19 4 US-10-146-733-5 US-09-746-491-58 5 US-10-074-978A-19 5 US-10-336-472-76	US-09-746-491-22 4 US-10-146-733-2 5 US-10-257-022-1 8 US-10-450-763-5 US-09-864-761-34	5 US-10-074-978A-2 5 US-10-424-599-21 5 US-10-451-892-10 0 US-09-852-386-74 7 US-10-461-862-12	-10-451-8 -10-459-1 -10-343-9 -10-461-8 -10-121-9
<b>14567</b>	7778	9 6 6 6 6 6	1 O M M M	90086	4 r o m a	292 292 295 294 294
77.00	2227	00000		00010	04666	17.1 17.1 17.0 16.9 16.9
000	110 110 110 79.	062. 836. 836. 836.		28. 28. 28. 79.	44	359 357.5 356.5 355
112 114 115	17 18 19	222 222 243 243 243	7 5 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6	33 21 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	4 4 4 4 4 0 11 52 52 4 4 62

## ALIGNMENTS

```
US-09-935-484-5

Sequence 5, Application US/09939484

Sequence 5, Application US/09939484

Sequence 5, Application US/09939484

GENERAL INFORMATION:

APPLICANT: Duprat, Fabrice

APPLICANT: Lazdunski, Michel

TITLE OF INVENTION: AND THEIR USE, ESPECIALLY FOR THE SCREENING OF DRUGS;

FILE REFERENCE: 1201-CIP-DIV-00

CURRENT APPLICATION NUMBER: US/09/939,484

CURRENT FILING DATE: 1998-09-01

PRIOR APPLICATION NUMBER: 08/144,914

PRIOR APPLICATION NUMBER: 08/149,816

PRIOR APPLICATION NUMBER: 60/095,234

PRIOR PILING DATE: 1998-08-04

PRIOR APPLICATION NUMBER: 60/095,234

PRIOR APPLICATION NUMBER: FR 96/01565

PRIOR APPLICATION NUMBER: EP 96/01565

PRIOR APPLICATION NUMBER: 200

NUMBER OF SEQ ID NOS: 24

SOFTWARE FILING DATE: 1996-02-08

NUMBER OF SEQ ID NOS: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , OTHER INFORMATION: TASK
US-09-939-484-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Murine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EQ ID NO 5
LENGTH: 405
US-09-939-484-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE:
```

Length 405;

2105; DB 9; No. 2.1e-198;

Score Pred.

100.0%;

Similarity

Query Match Best Local

.rapb

Ŋ

-483

-939

-09

```
61
                                                                                         241
                                                                                                          241
                                                                                                                                            301
                   121
                                    121
                                                      181
                                                                                                                            301
                                                                                                                                                              361
                                                                                                                                                                               361
                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                      ద
                                                                                                         셤
                                                                                                                                           d
                                                                                        ò
                                   ద
                                                                                                                                                                              d
                                                     à
                                                                                                                            ò
                                                                                                                                                              ð
                  ठे
  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                           240
                                                     120
                                                                      120
                                                                                         180
                                                                                                                                            240
                                                                                                                                                              300
                                                                                                                                                                               300
                                                                                                         180
                                                                                                                                                                                                360
                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                    9
                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                           CLONING
OF DRUGS
                                                    GIPLTLI
                                                                                                      AFSYYER
                                                                                                                                                                      |||||||
AAGGVGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GIPLTLI
                                                                                        AFSYYER
                AAGGVGV
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                         Sequence 5, Application US/09939483

Sequence 5, Application US/09939483

Sequence 5, Application US/09939483

Sequence 5, Application US/09939483

GENERAL INFORMATION:

APPLICANT: Lesage, Florian

APPLICANT: Lesage, Florian

APPLICANT: Lazdunski, Michel

APPLICANT: Lazdunski, Michel

TITLE OF INVENTION: FAMILY OF MAMMALIAN POTASSIUM CHANNELS, THEIR CLK

TITLE OF INVENTION: FAMILY OF MAMMALIAN POTASSIUM CHANNELS, THEIR CLK

TITLE OF INVENTION: FAMILY OF MAMMALIAN POTASSIUM CHANNELS, THEIR CLK

TITLE OF INVENTION: AND THEIR USE, ESPECIALLY FOR THE SCREENING OF ITILE REFERENCE: 1201-CIP-DIV-2-00

CURRENT APPLICATION NUMBER: 09/144,914

PRIOR FILING DATE: 1996-01-15

PRIOR FILING DATE: 1996-11-15

PRIOR FILING DATE: 1998-08-04

PRIOR FILING DATE: 1998-08-04

PRIOR FILING DATE: 1998-08-04

PRIOR FILING DATE: 1998-08-04

PRIOR FILING DATE: 1998-08-04
                                                   ·;
  ö
                                                                                       LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAA
                                                                                                                                                                      405
                                                                                                                                                                                                                                  405
                                                                                                                                                                                                                                                    405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                 DB 9;
1.1e-198;
98 0;
.;
0
                                                                                      MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 2105;
Pred. No. 2.1
; Mismatches
 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; S.
larity 100.0%; F.
Conservative 0;
 .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1996-02-08
OS: 24
 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: TASK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 2. SOFTWARE: PatentIn Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 Similarity 405; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Murine
                                                                                                                                                                                                                                                                            JT 2
9-939-483-5
405;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -09-939-483-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Н
                                                                      61
                                                                                                         121
                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                     61
                                                                                       121
                                                                                                                          181
                                                                                                                                           181
                                                                                                                                                             241
                                                                                                                                                                              241
                                                                                                                                                                                                                301
                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <del>--</del>1
                  ч
                                   ы
                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               : PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ENGTH:
 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE
                                                                                                                                                                                                                                                                             RESULT
US-09-9
                                                                                                        В
                                                                                                                                          5
C
                                                                                                                                                                              D
D
                                   20
                                                                     임
                                                                                                                                                                                                                g
                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                  õ
                                                    ठ
                                                                                       ò
                                                                                                                         à
                                                                                                                                                             ठे
                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
```

```
IC47611, IC47615,
AND 53763 MOLECULES
                                                      180
                                                                                                              180
                                                                                                                                                                                                                                                                                   300
   120
                                                                                                                                                                       240
                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                    MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                                                                                                                              RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGIPLTLI
                                                                                                                                                                       WTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIGAFLNLVV
                                                                                                                                                                                                    405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Curtis, Rory A.J.
APPLICANT: Glucksmann, Maria A.
APPLICANT: Glucksmann, Maria A.
APPLICANT: Silos-Santiago, Inmaculada
TITLE OF INVENTION: NOVEL TWIK-6, TWIK-7, IC23927, TWIK-8, 1
TITLE OF INVENTION: HNMDA-1, TWIK-9, alpha2delta-4, 54414,
TITLE OF INVENTION: AND USES THEREFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILE REFERENCE: MNI-248

CURRENT APPLICATION NUMBER: US/10/146,733

CURRENT FILING DATE: 2002-05-15

PRIOR APPLICATION NUMBER: US 60/185,938

PRIOR FILING DATE: 2000-02-29

PRIOR FILING DATE: 2000-02-29

PRIOR FILING DATE: 2000-03-03

PRIOR FILING DATE: 2000-04-07

PRIOR FILING DATE: 2000-04-07

PRIOR FILING DATE: 2000-04-11

PRIOR FILING DATE: 2000-04-11

PRIOR FILING DATE: 2000-04-16

PRIOR FILING DATE: 2000-04-26

PRIOR FILING DATE: 2000-04-26

PRIOR FILING DATE: 2000-04-26

PRIOR FILING DATE: 2000-04-26

PRIOR FILING DATE: 2000-09-19

PRIOR FILING DATE: 2000-09-19

PRIOR FILING DATE: 2000-09-25

PRIOR FILING DATE: 2000-09-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CRAIL FILLING DATE: 2002-05-15

OR APPLICATION NUMBER: US 60/185,938

OR FILING DATE: 2000-02-29

OR APPLICATION NUMBER: US 09/518,866

OR FILING DATE: 2000-03-03

OR APPLICATION NUMBER: US 60/195,734

OR FILING DATE: 2000-04-07

OR APPLICATION NUMBER: US 60/195,993

OR FILING DATE: 2000-04-11

OR APPLICATION NUMBER: US 60/199,799

OR FILING DATE: 2000-09-19

OR APPLICATION NUMBER: US 60/235,018

OR FILING DATE: 2000-09-25

OR FILING DATE: 2000-09-25

OR FILING DATE: 2000-09-25

OR APPLICATION NUMBER: US 60/235,059

OR FILING DATE: 2000-09-25

OR FILING DATE: 2000-12-15

OR APPLICATION NUMBER: US 60/256,240

OR FILING DATE: 2000-12-15

OR APPLICATION NUMBER: US 60/256,588

OR FILING DATE: 2000-12-12

OR APPLICATION NUMBER: US 60/256,588

OR FILING DATE: 2000-12-12

OR APPLICATION NUMBER: US 60/256,588

OR FILING DATE: 2000-12-12

OR APPLICATION NUMBER: US 60/256,588

OR FILING DATE: 2000-12-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 2001-02-28
APPLICATION NUMBER: US 09/828,035
FILING DATE: 2001-04-06
APPLICATION NUMBER: US 09/833,081
FILING DATE: 2001-04-11
APPLICATION NUMBER: US 09/843,128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 2001-04-25
APPLICATION NUMBER: US 09/957,683
FILING DATE: 2001-09-19
APPLICATION NUMBER: US 09/964,252
FILING DATE: 2001-09-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 9, Application US/10146733
Publication No. US20030165891A1
GENERAL INFORMATION:
```

.rapb

S -3  $\infty$ 4 1 σ 93

, US

셤

ઠે

ð

윱

පු

8

Б

ઠે

셤

õ

В

ð

a

ठे

```
86.4%;
ilarity 88.1%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 88.1%;
Matches 357; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TASK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                     Query Match
Best Local Similarity
Matches 357; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
OTHER INFORMATION:
09-939-483-4
    ; FEATURE:
; OTHER INFORMATION:
US-09-939-484-4
                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                      64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         350
                                                                                                                                                                                                       Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        184
                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                       124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
                                                                                                                                                                                                                                                   임
                                                                                                                                                                                                                                                                                                                                                    d
                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                    ਠੋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                    d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ਠੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                      7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         364
                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                       64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLONING
OF DRUGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SINTERPRETABLE SEGULATION SEGULAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGD-VRPRDPVTCAAAAG--G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LRFMTMNAEDEKRDAEHRALLTHNGQAGGLGGLSCLSGSLGDGVRPRDPVTCAAAAGGMG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                       GGYEELE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VGVGVGGSGFRNVYAEVI.HFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEHSHSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Duprat, Fabrice
APPLICANT: Duprat, Fabrice
APPLICANT: Lesage, Florian
APPLICANT: Lesage, Florian
APPLICANT: Lazdunski, Michel
TITLE OF INVENTION: FAMILY OF MAMMALIAN POTASSIUM CHANNELS, THEIR CLO
TITLE OF INVENTION: AND THEIR USE, ESPECIALLY FOR THE SCREENING OF D
FILE REFERENCE: 1201-CIP-DIV-00
CURRENT APPLICATION NUMBER: US/09/939,484
CURRENT FILING DATE: 2001-08-24
PRIOR APPLICATION NUMBER: 09/144,914
PRIOR FILING DATE: 1998-09-01
PRIOR FILING DATE: 1996-11-15
PRIOR FILING DATE: 1996-11-15
PRIOR FILING DATE: 1996-02-08
PRIOR FILING DATE: 1996-02-08
                                                                                                                                                                                                                                                                                                                                                     э
;
                                                                                                                                                                                                                                                                                                    412
                                                                                                                                                                                                                                                                                                                                                                                                    ENVRTLAL I VCTFTYLLVGAAVFDALESEPEMI ERORLELROLELRARYNLSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        412
                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                 DB 14;
                                                                                                                                                                                                                                                                                                                                                  2;
                                                                                                                                                                                                                                                                                                 Score 2065.5; DB 1,
Pred. No. 1.7e-194;
3; Mismatches 2;
PRIOR APPLICATION NUMBER: US 09/964,256
PRIOR FILING DATE: 2001-09-25
PRIOR APPLICATION NUMBER: US 10/024,623
PRIOR FILING DATE: 2001-12-17
NUMBER OF SEQ ID NOS: 85
SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 4, Application US/09939484
Patent No. US20020032322A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                               3;
                                                                                                                                                                                                                                                                                                ch 98.1%;
11 Similarity 98.0%;
400; Conservative
                                                                                                                                                                                                               ORGANISM: Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS: 24
SOFTWARE: Patentin Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      394
                                                                                                                                                                           412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-939-484-4
                                                                                                                   SOFTWARE: P
                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 400
                                                                                                                                                                                                                                                                                                                                                                                                    _
                                                                                                                                                                                                   PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ENGTH:
                                                                                                                                                                           LENGTH:
                                                                                                                                                                                                   TYPE:
```

```
Gequence 4, Application US/09939483

Sequence 4, Application US/09939483

Sequence 4, Application US/09939483

Sequence 4, Application US/09939483

GENERAL INFORMATION:

APPLICANT: Lesage, Florian

APPLICANT: Lazdunski, Michel

FILE OF INVENTION: FAMILY OF MAMMALIAN POTASSIUM CHANNELS, THEIR CLONING

TITLE OF INVENTION: AND THEIR USE, ESPECIALLY FOR THE SCREENING OF DRUGS

FILE REFERENCE: 1201-CIP-DIV-2-00

CURRENT FILING DATE: 1298-09-01

PRIOR APPLICATION NUMBER: 09/144,914

PRIOR PILING DATE: 1996-01-15

PRIOR PLING DATE: 1996-01-15

PRIOR PILING DATE: 1996-02-08

NUMBER OF SEQ ID NOS: 24

SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5;
                           2
                                                                                                                                                                                                                 240
                                                                                                        120
                                                                                                                                                              180
                                                                                                                                                                                        183
                                                                                                                                                                                                                                            243
                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                   123
                                                                                                                                                                                                                                                                                                 291
                                                                                                                                                                                                                                                                                                                                                      349
                                                     9
                                                                               63
                                                                                                      LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGVGV
                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                              ---GGSAHTTDTASSTAAA
                            14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94
                                                                                                                                                                                                                                                                                                                                                                               405
                                                                                                                                                                                                                                                                                                                                                                                                         394
                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
  Length
                                                                                                                                                                                                                                                                                                                                                                             Score 1819; DB 9;
Pred. No. 3.1e-170;
9; Mismatches 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 1819; DB 9;
Pred. No. 3.1e-170;
; Mismatches 25;
                                                                                                                                                                                                                                                                                      6
```

```
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EQ ID NO 17
LENGTH: 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SE
SOFTWARE: Pa
SEQ ID NO 17
                  244
                                                                         361
                                                                                           350
                                    301
                                                      292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
PRIOR
                 d
                                                      g
                                    ਨੇ
                                                                         ò
                                                                                                                                                                                                                                                                                                                                                   nnel Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                           183
                                                                                                              240
                                                                                                                                                  300
                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ^{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         243
                                    120
                                                       123
                                                                         180
                                                                                                                               243
                                                                                                                                                                    291
                                                                                                                                                                                                         349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GIPLTLV
                                   GIPLTLI
                                                 ||||||
GIPLTLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AFSYYER
                                                                                                                          AFLNLVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AFSHYEH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GIPLTLI
                                                                         MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                 LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGVGV
ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGGYEELE
         WIFFOAYYYCFITLTTIGFGDYVALOKDOALQTQPQYVAFSFVYILTGLTVIGAFLNLVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                    --GGSAHTTDTASSTAAA-
                                                                                                                        Potassium Chan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 394;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                    GGRYSDTPSRRCLCSGAPRSAISSVSTGLHSLSTFRGLMKRRSSV
                                                                                                                                                                                                                          GGRYSDTPSHPCLCSGTQRSAISSVSTGLHSLAAFRGLMKRRSSV
                                                                                                                                                                                                                                                                                                                   APPLICANT: Mu, David
APPLICANT: Mu, David
APPLICANT: Powers, Scott
APPLICANT: Tularik Inc.
TITLE OF INVENTION: KCNB: A No. US20020102676A1e1 Pot
FILE REFERENCE: 018781-004010US
CURRENT APPLICATION NUMBER: US/09/798,584
CURRENT FILING DATE: 2001-03-03
PRIOR APPLICATION NUMBER: US 60/186,951
PRIOR FILING DATE: 2000-03-03
NUMBER OF SEQ ID NOS: 18
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 15
LENGTH: 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 1819; DB 9;
Pred. No. 3.1e-170;
); Mismatches 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: human potassium channel KCNK3
9-798-584-15
                                                                                                                                                            Sequence 15, Application US/097985 Patent No. US20020102676A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>.</u>
۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     86.4%;
88.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity 88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                                                                                                                         SULT 6
-09-798-584-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  64
                                                       64
                                                                                                                                                                                                                                              350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           184
                  4
                                                                                                                                                                     244
                                                                                                                                                                                                         292
                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                     61
                                                                         121
                                                                                            124
                                                                                                              181
                                                                                                                               184
                                                                                                                                                  241
                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                               : PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE
                                                                                                                                                                                                                                                                          RESULT
US-09-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            d
                  g
                                                      d
                                                                                           d
                                                                                                                               원
                                                                                                                                                  8
                                                                                                                                                                    ద
                                                                                                                                                                                                         а
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                    8
                                                                                                                                                                                       à
                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                         ò
                                                                                                             ð
```

```
IC47611, IC47615,
, AND 53763 MOLECULES
 300
                                                                                                                              360
                                                                291
                                                                                                                                                                                         349
                                                                                                                        GVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEHSHSSPGG
LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGVGV
                                                                GGSAHTTDTASSTAAA
                                                                                                                                                                                                                                                        405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TWIK-8, I
                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: CURLIS, ROTY A.J.
APPLICANT: CURLIS, ROTY A.J.
APPLICANT: Glucksmann, Maria A.
APPLICANT: Glucksmann, Maria A.
APPLICANT: Glucksmann, Maria A.
APPLICANT: Glucksmann, Maria A.
TITLE OF INVENTION: HAWDA-1; TWIK-6, TWIK-7, IC23927, TWIK-7; TITLE OF INVENTION: HAWDA-1; TWIK-6, TWIK-7, IC23927, TWIK-7; TITLE OF INVENTION: HAWDA-1; TWIK-6, TWIK-7, IC23927, TWIK-7; TITLE OF INVENTION: AND USES THERFOR FILE OF INVENTION AND USES THERFOR FILE OF INVENTION NUMBER: US 60/185,938
PRIOR APPLICATION NUMBER: US 60/185,938
PRIOR FILING DATE: 2000-03-03
PRIOR FILING DATE: 2000-04-07
PRIOR FILING DATE: 2000-04-11
PRIOR FILING DATE: 2000-04-11
PRIOR FILING DATE: 2000-04-11
PRIOR PRILICATION NUMBER: US 60/195,734
PRIOR FILING DATE: 2000-05-25
PRIOR FILING DATE: 2000-05-25
PRIOR FILING DATE: 2000-05-25
PRIOR PELICATION NUMBER: US 60/256,240
PRIOR FILING DATE: 2000-05-25
PRIOR FILING DATE: 2000-05-25
PRIOR PELICATION NUMBER: US 60/256,588
PRIOR FILING DATE: 2000-12-21
PRIOR FILING DATE: 2000-12-28
PRIOR FILING DATE: 2001-04-06
PRIOR FILING DATE: 2001-04-06
PRIOR FILING DATE: 2001-04-06
PRIOR FILING DATE: 2001-04-16
PRIOR PRILING DATE: 2001-04-16
PRIOR PRILING DATE: 2001-04-19
PRIOR PRILING DATE: 2001-04-16
PRIOR PRILING DATE: 2001-04-16
PRIOR APPLICATION NUMBER: US 09/957,683
PRIOR FILING DATE: 2001-04-16
PRIOR APPLICATION NUMBER: US 09/957,683
PRIOR FILING DATE: 2001-04-16
PRIOR APPLICATION NUMBER: US 09/957,683
PRIOR PRILING DATE: 2001-04-19
PRIOR APPLICATION NUMBER: US 09/957,683
PRIOR PRILING DATE: 2001-04-19
PRIOR APPLICATION NUMBER: US 09/964,256
PRIOR APPLICATION NUMBER: US 09/964,256
PRIOR PRILING DATE: 2001-04-19
PRIOR PRILING DATE: 2001-04-19
PRIOR PRILING DATE: 2001-
                                     10/024,623
                                                                                                                                                                                                                                                                                                                                                                                                                                               10-146-733-17
Sequence 17, Application US/10146733
Publication No. US20030165891A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 2001-09-APPLICATION NUMBER: UFILING DATE: 2001-12-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 2001-3
R OF SEQ ID NOS: 85
```

S

Ø

Sa

```
NO 18
TH: 394
                                                                                                                                                                                                                                                                                                                                                              -
                                                                                                                                                                                                                                                                                                                                                                                                                                         64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 350
                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                292
                                                                                                                                                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                           LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <del>Q</del>
                                                                                                                                                                                                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11, IC47615,
53763 MOLECULES
                                                  7
                                                                                                                             120
                                                                                                                                                                              180
                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                         243
                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                             349
                                                                                                                                                     123
                                                                                                                                                                                                       183
                                                                                                                                                                                                                                                                                                           291
                                                                           9
                                                                                                   63
                                                                                                                                                                            MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                                                                  GVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEHSHSSPGG
                                                                                                                                                                                                                                                                                                                                                --GGGGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEQSHSSPGG
                                                                                      GIPLTLI
                                                                                                                                         GGYEELE
                                                                                                                                                                                                                              WTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIGAFLNLVV
                                                                                                                                                                                                                                                                                LRFWTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGVGV
                                                  Gaps
                                                                                                                                                                                                                                                                                                           ---GGSAHTTDTASSTAAA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IC476;
                                                  14;
                                                                         ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSE
                                                                                                                            RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALL
                         Length 394;
                                                                                                                                                                                                                                                                                                                                                                                      405
                                                                                                                                                                                                                                                                                                                                                                                                               394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       c-7, IC23927, TWIK-8, ]
alpha2delta-4, 54414,
                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                      GGRYSDTPSHPCLCSGTQRSAISSVSTGLHSLAAFRGLMKRRSSV
                                                                                                                                                                                                                                                                                                                                                                                                  Score 1819; DB 14;
Pred. No. 3.1e-170;
; Mismatches 25;
                                                                                                                                                                                                                                                                                                     LRFMTMNAEDEKRDAEHRALLTRNGQAGGGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILE REFERENCE: MNI-248

CURRENT APPLICATION NUMBER: US/10/146,733

CURRENT FILING DATE: 2002-05-15

PRIOR APPLICATION NUMBER: US 60/185,938

PRIOR FILING DATE: 2000-02-29

PRIOR FILING DATE: 2000-02-29

PRIOR FILING DATE: 2000-02-29

PRIOR FILING DATE: 2000-03-03

PRIOR FILING DATE: 2000-04-07

PRIOR FILING DATE: 2000-04-07

PRIOR FILING DATE: 2000-04-11

PRIOR FILING DATE: 2000-04-16

PRIOR FILING DATE: 2000-04-16

PRIOR FILING DATE: 2000-04-26

PRIOR FILING DATE: 2000-04-26

PRIOR FILING DATE: 2000-04-26

PRIOR FILING DATE: 2000-04-26

PRIOR FILING DATE: 2000-09-25

PRIOR FILING DATE: 2000-09-25

PRIOR FILING DATE: 2000-09-25

PRIOR FILING DATE: 2000-09-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TWIK-7,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US 60/256,240 FILING DATE: 2000-12-15 APPLICATION NUMBER: US 60/256,588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/258,028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CANT: Glucksmann, Maria A.
CANT: Silos-Santiago, Inmaculada
OF INVENTION: NOVEL TWIK-6, TWIK
OF INVENTION: HNMDA-1, TWIK-9, 6
OF INVENTION: AND USES THEREFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 18, Application US/10146733
Publication No. US20030165891A1
                                                9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A.J.
Maria A.
                         86.4%;
88.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 2000-12-18
APPLICATION NUMBER: US ELLING DATE: 2000-12-21
                                    11 Similarity 88.
357; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: CAPPLICANT: APPLICANT: TITLE OF INVTITLE OF INVTITLE OF INV
                                                                                                                                                    64
                        Query Match
                                                                           7
                                                                                                                             61
                                                                                                                                                                              121
                                                                                                                                                                                                       124
                                                                                                                                                                                                                                                        184
                                                                                                                                                                                                                                                                                                           244
                                                                                                                                                                                                                                                                                                                                                                                                               350
US-10-146-733
                                                                                                   4
                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                             292
                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                               -10-146-733
                                  Local
                                   Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                   5
                                                                                                                                                                                                                                                      d
                                                                                                  셤
                                                                                                                          ò
                                                                                                                                                                                                     <del>a</del>
                                                                                                                                                                                                                                                                                                          엄
                                                                                                                                                                                                                                                                                                                                                             占
                                                                                                                                                                                                                                                                                                                                                                                                               임
                                                                          ઠે
                                                                                                                                                                            ઠે
                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                   ठे
                                                                                                                                                                                                                                                                                                                                                                                       ठ
```

```
MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIGAFLNLVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ---GGSAHTTDTASSTAAA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14;
                                                                                                                                                                                                                                                                                                                                                                                                                                               394;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 405
                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 1819; DB 14;
Pred. No. 3.1e-170;
9; Mismatches 25;
PRIOR APPLICATION NUMBER: US 09/796,720
PRIOR FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: US 09/828,035
PRIOR FILING DATE: 2001-04-06
PRIOR APPLICATION NUMBER: US 09/833,081
PRIOR FILING DATE: 2001-04-11
PRIOR FILING DATE: 2001-04-25
PRIOR FILING DATE: 2001-09-19
PRIOR FILING DATE: 2001-09-19
PRIOR FILING DATE: 2001-09-25
PRIOR FILING DATE: 2001-12-17
NUMBER OF SEQ ID NOS: 85
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 68, Application US/10820474A; Publication No. US20050155089Al; GENERAL INFORMATION:
APPLICANT: LAL, PREETI
APPLICANT: TANG, Y. TOM
APPLICANT: CORLEY, NEIL C.
APPLICANT: GUEGLER, KARL J.
APPLICANT: AKERBLOM, INGRID E.
APPLICANT: AKERBLOM, INGRID E.
APPLICANT: AVE, HENRY
APPLICANT: PATTERSON, CHANDRA
APPLICANT: REDDY, ROOPA
                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 88.1%;
Matches 357; Conservative
                                                                                                                                                                                                                                                                                                                                                                      ; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-146-733-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 9
US-10-820-474A-68
```

180

120

123

183

240

243

300

360

349

7

9

.rapb

Ŋ

ന

```
APPLICATION NUMBER: US 60/256,240
      7
                                                     Sapiens
                                                                                                 l Similarity
357; Conser
      SOFTWARE: Patentin v
SEQ ID NO 5724
LENGTH: 394
TYPE: PRT
                                                  , ORGANISM: Homo US-10-756-149-5724
                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                     292
                                                                                                                                                                                     61
                                                                                                                                                                                                             64
                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                       244
                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                   350
                                                                                                                                                              4
                                                                                                                                                                                                                                                           124
                                                                                                                                                                                                                                                                                                         184
                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                       Query Match
Best Local
Matches 35
                                                                                         Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                         d
                                                                                                                                                                                                                                                                                                                                                                                                      성
                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                     ò
                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 5724, Application US/10756149
Sequence 5724, Application US/10756149
Publication No. US20050181375A1
GENERAL INFORMATION:
APPLICANT: Aziz, Natasha
APPLICANT: Zlotnik, Albert
TITLE OF INVENTION: NOVEL METHODS OF DIAGNOSIS OF METASTATIC CANCER
TITLE OF INVENTION: METHODS OF SCREENING FOR MODULATORS OF METASTATIC CANCER
FILE REFERENCE: file
                                                                                                                                                                                                                                                                                                                                                       2
                                                                                                                                                                                                                                                                                                                                                                                                                                                   123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              349
                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |||:||
Afshyeh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MFOSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGVGV
                                                                                                                                                                                                                                                                                                                                                                                                                              GIPLTLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                   GIPLTLV
                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -¥
                                                                                                                                                                                                                                                                                                                                                       14;
                                                                                                                                                                                                                                                                                                                                                                                                                          RVVLRLKPHKAGVOWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      394;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             394
APPLICANT: HILLMAN, JENNIFER L.
APPLICANT: BANDMAN, OLGA
TITLE OF INVENTION: SIGNAL PEPTIDE-CONTAINING MOLECULES
FILE REFERENCE: 039386-1568
CURRENT APPLICATION NUMBER: US/10/820,474A
CURRENT FILING DATE: 2004-04-07
PRIOR APPLICATION NUMBER: 09/720,533
PRIOR FILING DATE: 2001-03-20
PRIOR FILING DATE: 1999-06-25
PRIOR APPLICATION NUMBER: 60/090,762
PRIOR FILING DATE: 1998-06-26
PRIOR FILING DATE: 1998-07-31
PRIOR FILING DATE: 1998-07-31
PRIOR FILING DATE: 1998-07-31
PRIOR FILING DATE: 1998-10-01
NUMBER OF SEQ ID NOS: 269
SOFTWARE: PATENTIN VERSION 3.3
                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 1819; DB 18;
Pred. No. 3.1e-170;
9; Mismatches 25;
                                                                                                                                                                                                                                                                                             1229438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/10/756,149
CURRENT FILING DATE: 2004-01-12
NUMBER OF SEQ ID NOS: 5818
                                                                                                                                                                                                                                                                              NAME/KEY: misc feature
OTHER INFORMATION: Incyte Clone No:
0-820-474A-68
                                                                                                                                                                                                                                                                                                                                                     9;
                                                                                                                                                                                                                                                                                                                              86.4%;
88.1%;
                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 88.1
Matches 357; Conservative
                                                                                                                                                                                                                                                         ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                   64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               184
                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                      FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                    ದ್ದ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           임
                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                               ઠે
```

```
US-10146-733-8

Sequence 8, Application US/10146733

Publication No US20030165891A1

GENERAL INPORMATION

APPLICANT: Curtis, Rory A.J.

APPLICANT: Curtis, Rory A.J.

APPLICANT: Gluckemann, Maria A.

TITLE OF INVENTION: HAMDA-1, TWIK-9, alpha2delta-4, 54414, AND 53763 MOLECULES

TITLE OF INVENTION: HAMDA-1, TWIK-9, alpha2delta-4, 54414, AND 53763 MOLECULES

TITLE OF INVENTION: HAMDA-1, TWIK-9, alpha2delta-4, 54414, AND 53763 MOLECULES

TITLE OF INVENTION: HAMDA-1, TWIK-9, alpha2delta-4, 54414, AND 53763 MOLECULES

TITLE OF INVENTION NUMBER: US 60/185, 938

PRIOR FILING DATE: 2000-02-29

PRIOR PELICATION NUMBER: US 60/185, 938

PRIOR FILING DATE: 2000-04-10

PRIOR FILING DATE: 2000-04-10

PRIOR APPLICATION NUMBER: US 60/195, 933

PRIOR PELICATION NUMBER: US 60/195, 933

PRIOR APPLICATION NUMBER: US 60/195, 939

PRIOR FILING DATE: 2000-04-26

PRIOR FILING DATE: 2000-04-26

PRIOR FILING DATE: 2000-04-26

PRIOR FILING DATE: 2000-09-19

PRIOR FILING DATE: 2000-09-19

PRIOR FILING DATE: 2000-09-19

PRIOR PELICATION NUMBER: US 60/235, 018

PRIOR APPLICATION NUMBER: US 60/235, 018

PRIOR APPLICATION NUMBER: US 60/235, 018

PRIOR APPLICATION NUMBER: US 60/235, 059

PRIOR APPLICATION NUMBER: US 60/235, 059

PRIOR APPLICATION NUMBER: US 60/235, 059

PRIOR APPLICATION NUMBER: US 60/235, 059
                                                   2
                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                 SPGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                --GGGGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEQSHSSPGG
                                                                                                                                                                                                            RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGIPLTLI
                                                                                                                                                                                                                                                                                                                   MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGVGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEHSHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -GGSAHTTDTASSTAAA
                                                  14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          394
  Length
                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 1819; DB 18;
Pred. No. 3.1e-170;
; Mismatches 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6
86.4%;
larity 88.1%;
Conservative
```

.rapb

S ı

-483

939

g

an

Ø Ø

```
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MFOSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGVGV
                                                                                                                                                                                                                                                                                                                                                                                                                                          ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGGYEELE
                                                                                                                                                                                                                                                                                                                                                                                                                                                        SHSSPGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SHSSPGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIGAFLNLVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 --GGSAHTTĎTASSTÁAA--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEH
                                                                                                                                                                                                                                                                                                                                                                                                                  14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Price, Laura A.
APPLICANT: Pausch, Mark H.
TITLE OF INVENTION: Potassium Channels, Nucleotide Sequences
TITLE OF INVENTION: Encoding Them, and Methods of Using Same
NUMBER OF SEQUENCES: 56
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                          395;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                40
                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGRYSDTPSRRCLCSGAPRSAISSVSTGLHSLSTFRGLMKRRSSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGRYSDTPSHPCLCSGTQRSAISSVSTGLHSLAAFRGLMKRRSSV
                                                                                                                                                                                                                                                                                                                                                                                       Score 1819; DB 14;
Pred. No. 3.1e-170;
9; Mismatches 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DR FILING DATE: 2000-12-15

DR APPLICATION NUMBER: US 60/256,588

DR FILING DATE: 2000-12-18

DR APPLICATION NUMBER: US 60/258,028

DR FILING DATE: 2000-12-21

DR APPLICATION NUMBER: US 09/796,720

DR FILING DATE: 2001-02-28

DR APPLICATION NUMBER: US 09/833,081

DR APPLICATION NUMBER: US 09/843,128

DR FILING DATE: 2001-04-11

DR APPLICATION NUMBER: US 09/843,128

DR FILING DATE: 2001-04-25

DR APPLICATION NUMBER: US 09/964,252

DR FILING DATE: 2001-09-19

DR APPLICATION NUMBER: US 09/964,256

DR FILING DATE: 2001-09-25

DR FILING DATE: 2001-09-25

DR FILING DATE: 2001-09-25

DR FILING DATE: 2001-09-25

DR FILING DATE: 2001-09-25
                                                                                                                                                                                                                                                 FILING DATE: 2001-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 55, Application US/08816011 Publication No. US20030165806A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                      86.4%;
88.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                               EQ ID NOS: 85
                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Homo sapiens
US-10-146-733-8
                                                                                                                                                                                                                                                                                                                                                                                                   1 Similarity 357; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-816-011-55
                                                                                                                                                                                                                                                                                                         SEQ ID NO 8
LENGTH: 395
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         351
                                                                                                                                                                                                                                                                                                                                                                                                                                             Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                185
                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
Matches 35
                                                                                                                                                                                                                                                                                NUMBER OF SOFTWARE:
                                                                                                                                                                                                                                                                                  Q
F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 12
                                        PRIOR
    PRIOR
PRIOR
PRIOR
```

ద

ð

셤

ठ

원

ઠે

정

8

පු

δ

8

ठे

ઠે

```
US-10-870-492-55

Sequence 55, Application US/10870492

Publication No. US20050032165A1

GENERAL INFORMATION:

GENERAL INFORMATION:

TITLE OF INVENTION: POTASSIUM CHANNELS, NUCLEOTIDE SEQUENCES ENCODING THEM,

TITLE OF INVENTION: AND METHODS OF USING SAME

FILE REFERENCE: 01142.0114 SEQUENCE LISTING

CURRENT APPLICATION NUMBER: US/10/870,492

CURRENT FILING DATE: 2004-06-18

PRIOR APPLICATION NUMBER: US/09/503,849

PRIOR FILING DATE: 2000-02-15

PRIOR APPLICATION NUMBER: 08/816,011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGGYEELE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     250 LNLVVLRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDGVRPRDPVTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKV---FCMFYALLGIPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YERWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIG--AF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LNLVVLRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGD-VRPRDPVTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 1392.5; DB 8;
Pred. No. 2.4e-128;
; Mismatches 10;
                                                 COMPUTER: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/816,011
FILING DATE: 11-MAR-1997
CLASSIFICATION: 526
ATTORNEY/AGENT
  Products Corporation
                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: Matthews, Gale F.
REGISTRATION NUMBER: 32,269
REFERENCE/DOCKET NUMBER: 32,4
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-683-4117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
;
ADDRESSEE: American Home P
STREET: One Campus Drive
CITY: Parsippany
STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           / Match
Local Similarity 93.0%;
les 280; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                    312 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                   FORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                        single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ss: Blr
linear
                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: 201-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      310
                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-816-011-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ᆸ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            133
```

117

9

72

132

177

192

249

294

Sat

```
T 15
-459-190-15
                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                              184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                         181
                                                                                                                            244
                                                         ò
                                                                              염
                                                                                                     ਠੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and Nucleic Acids Encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                 132
                                                                                                                                                                                                                                                                                                            192
                                                                                                                                                                                                                                                                                                                                    235
                                                                                                                                                                                                                                                                                                                                                         249
                                                                                                                                                                                                                                                                                                                                                                                294
                                                                                                                                                                                                                                                                                                                                                                                                      309
                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                               PVTCAAA
                                                                                                                                                                                                          13 ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGGYEELE
                                                                                                                                                                                                                                                                                                                                 YERWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIG--AF
                                                                                                                                                                                                                                                                                                                                                                              LNLVVLRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGD-VRPRDPVTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGIPLTLI
                                                                                                                                                                                                                                                       GGYEELE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GIPLTLV
                                                                                                                                                                                                                                           ALLGIPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGYEELE
                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                              GGYEEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                              ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERORLELROLELRARYNLSE
                                                                                                                                                                                                                                                                                                                                                                                           ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERORLELROLELRARYNLSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                          RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKV---FCMFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 258
                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                Score 1392.5; DB 17;
Pred. No. 2.4e-128;
; Mismatches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1306; DB 9;
Pred. No. 6.3e-120;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Burgess, Catherine E.
TITLE OF INVENTION: No. US20020137202A1e1
FILE REFERENCE: 15966-621
CURRENT APPLICATION NUMBER: US/09/746,491
CURRENT FILING DATE: 2000-12-20
PRIOR APPLICATION NUMBER: USSN 60/171,329
PRIOR FILING DATE: 1999-12-21
            PCT/US95/14364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 61, Application US/09746491
Patent No. US20020137202A1
GENERAL INFORMATION:
                                                                                                                                                                     5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2;
         PRIOR APPLICATION NUMBER: PCT/U PRIOR FILING DATE: 1995-10-25 PRIOR APPLICATION NUMBER: 07/33 PRIOR FILING DATE: 1994-10-31 NUMBER OF SEQ ID NOS: 74 SOFTWARE: Patentin Ver. 2.1
                                                                                                                                                66.2%;
nilarity 93.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62.0%;
llarity 99.2%;
Conservative
1997-03-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 72
SOFTWARE: Patentin Ver.
                                                                                                              ORGANISM: Mus musculus -10-870-492-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus
                                                                                                                                               Query Match
Best Local Similarity
Matches 280; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 253; Conser
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  310
                                                                                                                                                                                                                                                                                                                                                                                                                            295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -09-746-491-61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
258
                                                                             ID NO SE
                                                                                                   TYPE: PRT ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 64
                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                    250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                73
                                                                                                                                                                                                                                                                                                                                 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT ORGANISM:
                                                                                                                                                                                                                                                                                       118
                                                                                                                                                                                                                                                                                                                                                        193
                                                                                                                                                                                                                                                                                                                                                                               236
                                                                                                                                                                                                                                                                                                                                                                                                                            295
                                                                                                                                                                                                                                                                                                                                                                                                                                                  310
                                                                                                                                                                                               -1
                                                                                                                                                                                                                                                                                                            133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -09-746-491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE:
SEQ ID NO 6
                                                                                         ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                   엄
                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                               유
                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
```

```
243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                 Diagnosing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYERWTF
               MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              f mouse
channel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           233
                                                                                                                                                                                                                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           domains of
potassium c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                Treating
                                                                                                                                                                                                                     Sequence 15, Application US/10459190
; Sequence 15, Application US/10459190
; Publication No. US20040072216A1
; GENERAL INFORMATION:
; APPLICANT: Johnson, Jeffrey D.
; APPLICANT: Schweitzer, Anthony C.
; APPLICANT: Bluwe, John E.
; APPLICANT: Bluwe, John E.
; APPLICANT: Metabolex, Inc.
; TITLE OF INVENTION: Methods and Compositions for Tre;
; TITLE OF INVENTION: Diabetes
; FILE REFERENCE: 016325-008210US
; CURRENT APPLICATION NUMBER: US/10/459,190
; CURRENT FILING DATE: 2003-06-10
; PRIOR FILING DATE: 2002-06-10
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 15
; LENGTH: 233
; TYPE: PRT
; ORGANISM: MUS SP.
; FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1200; DB 15;
Pred. No. 1.5e-109;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        transmembrane (TM) and pore
TWIK-related acid-sensitive
(TASK-1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22:55:17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2005,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  57.0%;
ilarity 99.6%;
Conservative 1
                                                                                                                     255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Search completed: September 15,
Job time: 171 secs
                                                                                                                      LRFMTMNAEDEKRDA
                                                                                                                                     Query Match
Best Local Similarity
Matches 232; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION:
OTHER INFORMATION:
-10-459-190-15
```

· rng

S 1

-483

-939.

60-

uB

```
5.1.6
Compugen Ltd.
version - 2005
GenCore
(c) 1993
         Copyright
```

frame\_plus\_p2n model using nucleic search, OM protein

Seconda (without alignments) 3444.677 Million cell 04:35:28 2005, 16, September . :

dates/sec ďn

US-09-939-483-5 2105 score: Title: Perfect

.. STGLHSLAAFRGLMKRRSSV 1 ENVRTLALIVCTFTYLLVGA...... Sequence:

405

**BLOSUM62** table: Scoring

0.5 7.0 7.0 Xgapext Ygapext Fgapext Delext Xgapop 10.0 Ygapop 10.0 Fgapop 6.0 Delop 6.0

8780412 hits satisfying chosen parameters of O Total number

residues

2959870667

seds,

4390206

Searched:

2000000000 0B 0B Minimum Maximum

length: length: seq seq Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Command line parameters:
-MODEL=frame+ p2n.model -DEV=xlh
-Q=/Cgn2\_1/USPTO\_spool/US0939483/runat\_15092005\_111359\_9662/app\_query.fasta\_1.583
-Q=/Cgn2\_1/USPTO\_spool/US0939483/runat\_15092005\_111359\_9662/app\_query.fasta\_1.583
-DB=N Geneseq\_16Dec04 -QFMT=fastap -SUFFIX=rng -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR\_SCORE=pct -THR\_MAX=100 -THR\_MIN=0 -ALIGN=15
-MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER=US09939483\_@CGN\_1\_1\_644\_@runat\_15092005\_111359\_9662 -NCPU=6 -ICPU=3
-NO\_MMAP -LARGEQUERY -NEG\_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV\_TIMEOUT=120 -WARN\_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7

Database

printed Ø No. is the number of results predicted by chance to have greater than or equal to the score of the result being properived by analysis of the total score distribution. . No . and is score

# SUMMARIES

	Description	Aaz98176 Human	Aaa27746 Human pot	Adi27914 Human DNA	Aas12179 Murine 2P	Adi27949 Human TWI
37111110	ID		AAA27746	ADI27914	AAS12179	ADI27949
			ო	12	4	12
	Length DB	155	2514	2590	926	1122
	% Query Match	86.	9		7.	7
	Score	1819	œ	1819	4	⊣
	Result No.	-	7	m	4	

	9	10			ო	588	5886
	7	10		12		999	4999 Nucleot
	ω	10		12	10	344	34472
	თ	10		24	9	AAD21998	1998 Human
		10			φ	AAD36247	62
		10		26	12	2	Adi27947 Human TWI
		10			M	AAA75887	Aaa75887 Expressed
		10		3	Ŋ	AAH75002	5002
		10		2		ADR65962	2 Huma
		10		2		ADR66646	646 Human
		55.		62	10	ADH34471	1 Rat po
		50.		28		ADB80477	80477 Ovar
		•		52	ស	52	7526 Human TWI
		50.	0	52	12	O	2791
		84	0	20	12	279	27913 Human
		42.		21	4	AAC86163	6163 FCTR11
		•	0	21	10	184	18421 Humar
		42.		52	S	AAD17525	7525 H
		42.	0	52	12	σ	Adi27908 Human TWI
		42.	Ö	46	9	0	2005
U		m	6	H		ADK18423	
U		m	6	11		ADK18419	
U		ന	6	1113	10	84	18429 Human
		m	φ.	20		791	27910 Human
	30	779.5	37.0	3	ស	346	93460 DNA enc
		~	9	22	4	538	25380 Nuc
		S	5	0	4	511	15117
		4	S.	19	4	ABL29941	9941
U		2	4	994	4	AAI20418	0418
U		2	4	9	4	ABA65456	
U		~	4	9	4		Aai45622 Probe #14
O		2	4	992	4	ABA47563	47563 Human
U		2	4	9	4	ABA32553	Aba32553 Probe #11
U		2	4	9	4	σ	9608 Human
O		2	4	166	4	AAK13864	Aak13864 Human bra
U	41	2	4	9	4	919	39198 Human
O		2	4	Ø	വ	0	0
υ		2	4	166	9	369	13699 Human ge
	44	ش	m	œ	φ	σ	
O		13.	٠. ص	œ	9	954	29547 Oligonuc
						ALIGNMENTS	
RES	SULT 1						
AA	398176		,				
<b>a</b> }	AA2	98176	standard	; cdna;	155	1 BP.	
<b>4</b> 2	K	. 261964					
₹ X	Š	, 0 / TOE					

entry) (first 11-MAY-2000 

containing protein HSPP-68 cDNA SEQ ID NO:202 peptide Human signal Human; signal peptide-containing protein; HSPP; diagnosis; cancer; inflammation; cardiovascular disease; anticancer; anti-inflammatory; antimicrobial; nootropic; neuroprotective; cardiovascular; hepatotropic; antiasthmatic; gene therapy; cell proliferation; neurological disorder; reproductive disorder; developmental disorder; arteriosclerosis; cirrhosis; psoriasis; acquired immune deficiency syndrome; anaemia; asthma; Crohn's disease; infection; Alzheimer's disease; schizophrenia; parkinson's disease; Huntington's diseases; ovulatory defect; muscular dystrophy; ss.

sapiens. Homo WO200000610-A2

06-JAN-2000

99WO-US014484 25-JUN-1999

98US-0090762P 26-JUN-1998;

D

```
human signal peptide-containing proteins HSPP-1 to HSPP-134. HSPPs have anticancer, anti-inflammatory, antimicrobial, nootropic, hepatotropic, anticancer, anti-inflammatory, antimicrobial, nootropic, hepatotropic, neuroprotective, cardiovascular and antiaathmatic activities, and can be used in gene therapy. HSPPs can be used to treat or prevent disorders associated with decreased activity or function of HSPP. Antagonists of HSPP are used to treat or prevent disorders associated with increased activity or function of HSPP. Such diseases include cell proliferation (including cancer), inflammation, cardiovascular, neurological, reproductive or developmental disorders, (e.g. arteriosclerosis, cirrhosis, psoriasis, acquired immune deficiency syndrome, anaemia, asthma, Crohn's disease, microbial or other infections, congestive or ischaemic heart disease, Alzheimer's, Parkinson's or Huntington's diseases, schizophrenia, ovulatory defects, muscular dystrophy). HSPP nucleic acids can be used for the recombinant production of HSPP, for detecting HSPP in standard hybridisation and amplification assays (for diagnosis and monitoring), in gene therapy, as antisense, triplex-forming or ribodyme therapeutics, for detecting related sequences or genetic variations, and for chromosomal mapping. HSPP are also used to raise specific antibodies (Ab) and to screen for agentisc antibodies (in usual immunoassays), as therapeutic antagonists, in competitive drug screens, and for purification of HSPP from natural
                                                                                                                                                                                                                                                                                                                                                                                                                                                      // HSPP
SPP, for
says (for
plex-forming
yenetic
raise
onists
onists
onitor, HSPP
agonists, in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ||GlyAla
||||||||
|GGGCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        uGluLeu
||||||||
GGAGCTG
                                                                                                     Ľ
                                                                                      Baughn
2, Hill
                                                                                                                                                                                    signal peptide-containing proteins useful in treatment and diagnosis of e.g. cancer, inflammation and card
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GluAsnValArgThrLeuAlaLeuIleValCysThrPheThrTyrLeuLeuVa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    U; 0 Other;
                                                                                                  ď
                                                                                     Guegler KJ,
n C, Reddy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1551
357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25
14
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                     GA, Corley NC, Gueg
Yue H, Patterson C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               496 G; 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (1-1551)
                                                                                                                                                                                                                                           English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ΰ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        x AAZ98176
 98US-0094983P.
98US-0102686P.
98US-0112129P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              256 A; 550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3.1e-184
1819.00
90.37%
88.15%
86.41%
                                                                                    T, Gorgone Au-Young J,
                                                                                                                                                                                                                                           327pp;
                                                          INC
                                                          INCYTE PHARM
                                                                                                                                           WPI; 2000-160673/14
P-PSDB; AAY87291.
                                                                                                                                                                                                                                           290;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-939-483-5 (1-405)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                            Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1551
31-JUL-1998;
01-OCT-1998;
11-DEC-1998;
                                                                                   Tang
n IE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                 prevention disease.
                                                                                                                 Bandman 0;
                                                                                                                                                                                     human
                                                                                          Akerblom
                                                                                                                                                                                                                                           ٠.
ن
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101
                                                         (INCX-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
DB:
                                                                                                                                                                                                                                           Claim
                                                                                     Q,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ..
02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sour
                                                                                  Lal
                                                                                                                                                                                      Nev
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred.
Score
 엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     d
d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
```

```
40
                   460
                                               200
                                                    640
                                                                                         80
                                                                                                              20
                                                                                                                         40
                                                                                                                                                         00
0
     0
                                                          220
                                                                                   820
                                                                                               59
                                                                                                    00
                                                                                                                    58
                                                                                                                                    9
                                                                                                                                               0
                          9
                               20
                                     80
                                          0
                                                               00
                                                                         760
                                                                    240
                                                                               9
                                                                                                          04
                                                                                                                                                         PhevalSerCysIleSerThrLeuCysIleGlyAlaAlaAlaPheSerTyrTyrGluArg
                                                         GlyvalGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGlnSerMet
                                                                                                                                    ВР
                                                                                                                                                                                    4
                                                                                                                                                                    405
                                                                                                                                                                          12
                                                                                                                                                                    CDNA
                                                                                                                                                                                    standard
                                                                                                                          321
                                                                                                                                                               1139
                                          521
                                               181
                                                                                                          860
                                                                                                               301
                                                                                                                    908
                                                                                                                                          019
                                                                                                                                                    079
                                                                                                                                                                          66
281
                                     161
                                                     581
                                                               641
                                                                          701
                                                                                               821
                                                                                                     281
                                                                                                                               959
                                                                                                                                                                     401
                                                                                                                                                                               T 2
746
AAA27
                                                                                                                                                                               RESULT
AAA2774
ID AA
XX
AC AA
                                                         Š
                                                                                              <del>L</del>
                          8
                                          В
                                                               Db
     8
                    ద
                                     ð
                                               8
                                                    셤
                                                                    ð
                                                                         셤
                                                                               ò
                                                                                    셤
                                                                                          8
                                                                                                    ò
                                                                                                          셤
                                                                                                               δ
                                                                                                                    g
                                                                                                                          8
                                                                                                                               සු
                                                                                                                                    8
                                                                                                                                         ద
                                                                                                                                               ઠ
                                                                                                                                                          8
```

220

80

aGlySer |||||||| cGGCTCC

9

ArgGlnLeuGluLeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGluLeuGlu ||||||| |GGCAGCAGGAGCTGCGGGCGCGCTACAACCTCAGCCAGGGGGGGCTACGAGGAGCTGGAG

41

ð

161

<del>Q</del>

61

8

221

g

 PheTyrPheAlalleThrVallleThrThrIleGlyTyrGlyHisAlaAlaPr

81

```
; human;
; hypotensive; epilepsy;
re disease; ischaemia;
r therapy; chromosome 2p23;
                                                                                                                                                                                                                                                               New nucleic acid encoding a non-inactivating outwardly rectifying potassium transport channel, designated TASK2, useful in the treatment hypertension or dysfunctions of the kidney, liver or pancreas.
                              TASK1; TWIK-related acid-sensitive K+ channel 1; human; potassium channel; drug screening; hypertension; hypotens arrhythmia; vascular diseases; neurodegenerative disease; anoxia; endocrine disease; muscle disease; gene therapy;
                                                                                                Location/Qualifiers
126. .1310
/*tag= a
                 Human potassium channel TASK1 cDNA.
                                                                                                                                                                                                                        Ξ
                                                                                                                                                                                                                                                                                               English.
                                                                                                                                                                                                                        Lazdunski
                                                                                                                                                                                                         SCI
                                                                                                                                                                               98US-0107692P.
99US-00436265.
                                                                                                                                                                99WO-IB001886
                                                                                                                                                                                                         RECH
  entry)
                                                                                                                                                                                                                                                                                                91pp;
                                                                                                                                                                                                        CENT NAT
                                                                                                                                                                                                                        Lesage F,
(first
                                                                                                                                                                                                                                        2000-376487/32
                                                                                                                                                                                                                                                                                                ω
••
                                                                                                                                                                                                                                                AAY79674
                                                                                                                                                                                                                                                                                                Disclosure; Fig
                                                                                                                                WO200027871-A2
                                                                                sapiens.
                                                                                                                                                                                                        CNRS
                                                                                                                                                                               09-NOV-1998;
08-NOV-1999;
                                                                                                                                                                6661-VON-60
 29-AUG-2000
                                                                                                                                                18-MAY-2000
                                                                                                                                                                                                                        Œ,
                                                                                                                                                                                                                                               P-PSDB;
                                                                                                                                                                                                       (CNRS)
                                                                                                                                                                                                                        Duprat
                                                                                 Ношо
                                                                                                        CDS
                                                                                                                                                                                                                                        WPI
                                                                 88
```

The present sequence is that of cDNA encoding human TASK1 (TWIK-related acid-sensitive potassium channel). The cDNA was isolated from a human kidney cDNA library using as probe a murine clone that had been identified from database searches using TWIK-1 and TREK-1 sequences.

TASK1 belongs to a new family of 2P domain potassium channels, also including TWIK-1 (see AAY79673) and novel TASK2 (see AAY79675). The TASK1 gene is located on chromosome 2p23. TASK1 is expressed in many different tissues, and at particularly high levels in pancreas and placenta. Host cells expressing TWIK-1 family members can be used to screen for substances that modulate the activity of members of the TWIK-1 family of potassium channels. The drugs identified may be useful in the treatment of diseases of the heart or of the nervous system, such as epilepsy, arrhythmia, vascular diseases, neurodegenerative diseases, kidney, liver or pancreas diseases associated with anomalies of hormone secretion, and muscle diseases. Nucleic acid sequences can be used for diseases, in gene therapy and in the recombinant production protein

Other; 0 n; 0 Ţ. 461 .; Ö 756 ΰ A; 816 481 2514 BP; Sequence

```
2514
357
9
25
14
2
               Matches:
Conservative:
Mismatches:
                                          Indels:
         Length:
        6.48e-184
               1819.00
90.37%
88.15%
86.41%
                     Percent Similarity:
Best Local Similarity
Query Match:
Alignment Scores:
         .. oN .
                Score:
         Pred
```

(1-2514)x AAA27746 US-09-939-483-5 (1-405)

20	194	
LeuAlaLeuIleValCysThrPheThrTyrLeuLeuValGlyAla 2	GCACGCTGGCGCTCATCGTGCACCTTCACCTACCTGCTGGTGGGCGCC 194	
<b>GluAsnValArgThr</b>	CAGAACGTGCGCACG	
oy 1	Db 135	
O.	Ω	

luteu 40         AGCTG 254	euGlu 60        :TGGAG 314	11ySer 80         GCTCC 374	erThr 100        GCACG 434	eulle 120   ::: :TCGTC 494	rgAla 140       :GCGCC 554	legly 160        TCGGC 614	UArg	heGly 200        TCGGC 734	laPhe 220	alval 240	TGGTG 854	laLeu 260        CGCTG 914	erLeu 280	1yVal 300	866	erMet 320	ccard 1052		TCAIC IIIZ	yGly 360        GAGGG 1172	rgSer 380	GCTCC 1232	etLys 400
rgGlnArgLeu(            3GCAGCGGCTG	YTYrGluGlu              3CTACGAGGAG	rpArgPheAla(            3GCGCTTCGCC	isAlaAlaPro            ACGCGCACCC	eProLeuThr               CCCGCTCACG	/rLeuLeuHis/               \ccTGCTGCAC	snMetValleu:                 \carggreercy	neSerTyrTyrC      :::     CTCCCACTACC	rrhrilegly!                  caccarceec	roglnTyrval/              GCAGTACGTG	eLeuAsnLeu\	recreadecre	laGluHisArg/             CGAGCACCGC	sLeuSerGly8	aGlyGlyVal(		ouHisPheGln8	GCACTTCCAG	rileProMet	CAICCCCAIG	.sserserProc              crcgrcgccgc	rglyThrGln	GGGGGGCGCCAC	eArgGlyLeuM
uMetIleGlua  :::        GCTGATCGAGC	uSerGluGlyG      :::       cagccagggcg	aGlyvalGlnT             CGGCGTGCAGT	eglyTyrglyH              cggcTAcggg	101 AspGlyGlyLysValPheCysMetPheTyrAlaLeuLeuGlyIleProLeuThrLeuIle 120 	rPhevalargT 	SerMetalaa 	yAlaAlaAlaP               cGccGccGccr	elleThrLeuT                CATCACCCTCA(	uGlnThrGlnP.             GCAGACGCAGC	lileGlyAlaP)	CATCGGCGCCT	uLysargaspa.	yGlyLeuSerC	salaalaalaa.	CACGGCGGCAG	rAlaGluValL	CGCGGAGGTGC	sLeuGlnTyrS	GCTGCAGTACT	GluHisSerH:       GAGCAGAGCC	oCysLeuCysSe	CTGCCTGTGCAC	rLeuAlaAlaP
ıSerGluProGl                   3rcGGAGCCCGA	aArgTyrAsnLe             3CGCTACAACCT	sProHisLysa]            sccGcacaaggc		sMetPheTyral 	uargileasnih             sccarcaacac	gHisAlaGluVa    :::   scgcGccGAcGT	rLeuCysIleG  	TyrTyrCysPh               TACTACTGCTT	sAspGlnAlaLe             GACCAGGCCCT	GlyLeuThrVa	seccreacer	AlaGluAspGl              GCCGAGGACGA	NalGlyLeuGl     	ProvalThrCy	PACCGCCTCATC	ArgAsnValTy	CGCAACGTCTA	SerArgGluLy	AGCCGCGAGAA	:AspThrCysVa             :GACACGTGCGT	ProSerHisPr	SCCTCGCGACG	:GlyLeuHisSe
AspAlaLeuGlu 	31uLeuArgA1e                  3AGCTGCGGGCC	Leuargleulys 	AlaileThrval             GCCATCACCGTO	LysvalPheCys                  \AGGTGTTCTGC	SerLeuGlyGlu 	leuGlyMetArg 	CyslleSerThr 	PheGlnAlaTyr              rTCCAGGCCTAC	\laLeuGlnLye              CGCTGCAGAAG	YrlleLeuThr	racarcerrace	1etThrMetAsn 	\anglyGlnAla 	ArgProArgAsp	  acactacggac	lySerGlyPhe	Seceses	euTrpTyrLys	TGTGGTACAAC	euSerThrSer              :rcrccAcGrcc	YrSerAspThr	ACAGCGACACC	erValSerThr
AlavalPhe	ArgGlnLeu(           CGGCAGCAG	Argvalval)             CGCGTCGTG	PheTyrPhe	AspGlyGly  	MetPheGlns             ATGTTCCAG	Lysargglyi    :::      AAGAAGGGG	Phevalser(            TTCTTCTCG	TrpThrPhel	AspTyrval# 	SerPheVal7	. Agerregren	LeuArgPheN	LeuThrHisA	GlyAspval	   GGCAGCGCG	. GlyValGlyC	) ) ) ) )	CysSerCysI		ProArgAspI               CCGCGGGACC	. GlyGlyArg		. AlaileSerS
21	41	61	81 375	101	121	141	161	181	201	221	795	241 855	261	281	954	301	666	321	TOP	341	361	1173	381
λ d	S G	\$ g	\$ a	දු පු	දු පු	<b>상</b> 원	у В	\$ a	\$ 8	ò	OP	\$ a	<u>ک</u> ج	ð	Ωp	ò	QQ	8	g ,	୪଼ ଶ	à	QQ	δy

Sat

Ø

S

```
4
                                                                                                                               829
                                                                                                                                                                                                                        x ADI2791
                                                                                                                                                        6.78e-18
1819.00
90.37%
88.15%
86.41%
                                                                                                                                A;
                                                                                                                               502
                                                                                                                                                                                                                         -405)
                                                                                                                              BP;
                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                               Alaval
                                                                                                                                2590
                                                                                                                                                                                                                         Ċ
                                                                                                                                               Alignment Scores
Pred. No.:
Score:
                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                               -ტ
                                                                                                                                                                                                                         US-09-939-483-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      141
                                                                                                                                                                                                                                                                               21
                                                                                                                                                                                                                                                                                                                    41
                                                                                                                                                                                                                                                                                                                                                                                                           375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                               equence
                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                        315
                                                                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  201
                                                                                                                                                                                                                                                             135
                                                                                                                                                                                                                                                                                                195
                                                                                                                                                                                                                                                                                                                                    255
                                                                                                                                                                                                                                                                                                                                                                                                                              101
                                                                                                                                                                                                                                                                                                                                                                                                                                                435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      79
 d
                                                                                                                                                                                                                                                                                                                                                                                                           d
                                                                                                                                                                                                                                                                                                                                                                                                                                               요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   원
                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                        엄
                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               පු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                            ઠ
                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of
          12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           y be used
tifying
ctivity of
the
                                                                                                                                                         Human; gene; ds; ion channel family; ICF; cancer; leukaemia; Alzheimer's disease; Parkinson's disease; multiple sclerosis; epilepsy hepatic disorder; cardiovascular disorder; cytostatic; neuroprotective nootropic; antiparkinsonian; hepatotropic; cardiovascular.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              47611,
n channel
IC23927,
4414 and
         ATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TWIK-6, TWIK-7, IC23927, TWIK-8, IC47611, IC47615, HNMDA-1, TWIK-9, alpha2delta-4, 54414, or 53763 nucleic acids and proteins, useful for preventing, diagnosing and treating e.g. cancers, Alzheimer's disease cardiovascular disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to TWIK-6, TWIK-7, IC23927, TWIK-8, IC47611 IC47615, HNMDA-1, TWIK-9, alpha-2delta-4, 54414 and 53763 ion chafamily (ICF) nucleic acids and proteins. The TWIK-6, TWIK-7, IC27WIK-8, IC47611, IC47615, HNMDA-1, TWIK-9, alpha-2delta-4, 5441453763 ICF nucleic acids and proteins may be used for preventing, diagnosing and treating ICF-related diseases. The sequences may lto treat disorders associated with decreased expression by rectimulations or deletions in a patient's genome that affect the actimutations by expressing inactive proteins or to supplement the
Silos-Santiago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7; 638pp; English
                                                                                   ВР
                                                                                                                                                                                                                                                                            2000US-00515520.

2000US-0185938P.

2000US-0195734P.

2000US-0195734P.

2000US-0195799P.

2000US-019799P.

2000US-0235018P.

2000US-0235018P.

2000US-0235018P.

2000US-0256240P.

2000US-0256240P.

2000US-0256240P.

2001US-00796720.

2001US-00828035.

2001US-00843128.

2001US-00964256.

2001US-00964256.
                                              1307
                            405
                                                                                   2590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (MILL-) MILLENNIUM PHARM INC
                                                                                                                                                                                                                                                             2002US-00146733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MA,
                                                                                                                        entry)
                                          CGCAGGAGCTCCGTG
                             Val
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Glucksmann
                                                                                  standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; SEQ ID NO
                             er'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2004-069000/07.
                                                                                                                      (first
                                                                                                                                                                                                                         US2003165891-A1
                                                                                                                                                                                                                                                                             29-FEB-2000;
03-MAR-2000;
07-APR-2000;
11-APR-2000;
26-APR-2000;
25-SEP-2000;
25-SEP-2000;
25-SEP-2000;
25-SEP-2000;
25-SEP-2000;
21-DEC-2000;
21-DEC-2000;
21-APR-2001;
11-APR-2001;
25-APR-2001;
25-APR-2001;
25-APR-2001;
25-APR-2001;
25-APR-2001;
                                                                                                                                        #1
                                                                                                                                                                                                       sapiens
                                                                                                                                                                                                                                                             5-MAY-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RAJ,
                                                                                                                                                                                                                                            04-SEP-2003
                                                                                                                      06-MAY-2004
                                                                                                                                        Human DNA
                                                                                                    ADI27914;
         1233
                                              1293
                            401
                                                                                  ADI27914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Curtis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI;
                                                                                                                                                                                                        Homo
                                                                 RESULT
                                                                         ADI27
                                                                                          ò
```

```
patients own production of ICF proteins. The proteins may also be used as antigens in the production of antibodies against ICF proteins and in assays to identify modulators of ICF protein expression and activity. The anti-ICF protein antibodies, agonists and antagonists may be used to regulate ICF protein expression and activity. The antibodies may also be used as diagnostic agents for detecting the presence of ICF proteins in samples (e.g. by immunoassay). The nucleic acids and proteins may be used to prevent, diagnose and treat a wide variety of disorders, e.g. cancers and leukaemia, Alzheimer's disease, Parkinson's disease, multiple sclerosis, epilepsy, hepatic disorders and cardiovascular disorders. This sequence represents human DNA used in the scope of the invention. Note: The sequence data for this patent is also available in electronic format from USPTO at segdata.uspto.gov/sequence.html.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     554
                                                                                                                                                                                                                                                                                                                         194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            434
                                                                                                                                                                                                                                                                                                                                                                       254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94
                                                                                                                                                                                                                                                                                                                                                                                                                                          80
                                                                                                                                                                                                                                                                                                                                                40
                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                U; 0 Other
                                                                                                                                                                                                 590
                                                                                                                                                                                                 22 35 5
24 4 2
                                                                                                                                                               0
                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                               Ë
                                                                                                                                                               470
                                                                                                                                                              9
                                                                                                                                                                                                                                                                               2590)
                                                                                                                                                               789
                                                                                                                                                                                                                                                                                (1-
                                                                                                                                                               ΰ
```

S

0

rng

S

S

```
셤
                                                                                                                                                                                요
                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                 日
                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                             엄
                                                                                                                                                                                                    요
                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                      ò
                                                                                                                                                                                          ò
                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                   1172
                                                                                               1112
                                                                                                                                        1232
                                                                           1052
                                                                 320
                                                                                     340
                                                                                                         360
                                                                                                                             380
                                                                                                                                                  400
                         280
              914
                                                                 .nSerMet
                                                                                                                                                  NUMETLYB
    gAlaLeu
|||||||
GGCGCTG
                                                                                     tileile
                                                                                            GATCATC
                                                                                                                             Transmembrane potassium ion channel protein; inward potassium flux; se pest control; membrane potential; pesticide; antihelminthic; nematode; insect; 2P channel; mouse.
                                                                                                         ySerLeu
                                             lGlyVal
                                                                                                                                                  LeuArgPheMetThrMetAsnAlaGluAspGluLysArgAspAlaGluHisArg
                                                                GlyvalGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGl
                        GlyAspValArgProArgAspProValThrCysAlaAlaAlaAlaGlyGlyVa
                                                                                                                                                                                                                                                                                           "Mouse 2P channel protein #1"
                                                   Location/Qualifiers
30. .956
/*tag= a
/product= "Mouse 2P
                                                                                                                                                                                                                                   Murine 2P channel cDNA clone #1
                                                                                                                                                                                                     M
                                                                                                                                                                                1307
                                                                                                                                                                     ArgArgSerServal 405
                                                                                                                                                                                                     926
                                                                                                                                                                                                                                                                                                                         2001WO-US004680
                                                                                                                                                                                                                                                                                                                                   2000US-00503849
                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                     CDNA;
                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-536570/59
P-PSDB; AAU07620.
                                                                                                                                                                                                     standard;
                                                                                                                                                                                                                                                                                                     WO200161006-A2
                                                                                                                                                                                                                                                                                                                        14-FEB-2001;
                                                                                                                                                                                                                                                                                                                                   15-FEB-2000;
                                                                                                                                                                                                                                                                 musculus
                                                                                                                                                                                                                                                                                                                                             (BADI ) BASF
                                                                                                                                                                                                                         21-NOV-2001
                                                                                                                                                                                                                                                                                                               23-AUG-2001
                                                                                                                                                                                                                                                                                                                                                        ausch MH;
                                                                                                                                                            1233
                                                                                                                                                                                                               AAS12179;
               855
                         261
                                  915
                                             281
                                                       954
                                                                 301
                                                                                               1053
                                                                                                                   1113
                                                                                                                                       1173
                                                                                                                                                                                1293
                                                                                                                                                                                                    AAS12179
    241
                                                                                                         341
                                                                                                                                                                      401
                                                                           666
                                                                                     321
                                                                                                                                                   381
                                                                                                                              361
                                                                                                                                                                                                                                                                  Mus
                                                                                                                                                                                                                                                                            Key
                                                                                                                                                                                           RESULT
                                                                                                                                                                                                AAS121
                                                                                                                                                                                                    XHXHXHXHXHXHXHXHXHXHXHXHXHXHXHXHX
                                  g
              <del>Q</del>
                                                      임
                                                                           ద
                                                                 δ
                                                                                               원
                                                                                                                   g
                                                                                                                                       S
S
                                                                                                                                                            ద
                        ò
                                             Š
                                                                                     8
                                                                                                         δ
                                                                                                                              δ
                                                                                                                                                  δ
                                                                                                                                                                      ð
                                                                                                                                                                                8
```

```
160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               545
                                                                                                                                                                                                                                                                                                                                           185
                                                                                                                                                                                                                                                                                                                                                                                                                                          100
                                                                                                                                                                                                                                                                                                                                                                                                                                                             365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              220
                                                                                                                           'n
                                                                                                                                                                                                                                                                                                     125
                                                                                                                                                                                                                                                                                                                                                                                                                       305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 724
                                           The invention relates to a mutant potassium ion channel protein, having four membrane spanning domains and two pore forming domains, comprising a mutation at the second pore forming domain. The expression of the mutant protein in a cell confers improved inward potassium flux and the ability to grow in the presence of potassium. Mutant proteins and their corresponding polynucleotide sequences can therefore be used to improve inward potassium flux into cells under acidic conditions by modulating the membrane potential using therapeutic agents. The sequences may be used to develop agonists and antagonists of potassium channel proteins in order to control pests such as nematodes and insects. This sequence represents a mouse cDNA encoding a 2P channel protein
                                                                                                                                                                                                                                                                                                                         40
                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                    80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GluasnvalargThrLeuAlaLeuIleValCysThrPheThrTyrLeuLeuValGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                         improving
protein for
                                                                                                                                                                U; 0 Other
                                                                                                                                                                                              90
                                                                                                                                                                                             601441
n ion channel conditions.
                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                 0
                                                                                                                                                                 H
                                                                                                                                                                 186
                            English
                                                                                                                                                                 .;
Ö
                                                                                                                                                                                                                                                                (1-956)
 a mutant potassium
flux under acidic c
                                                                                                                                                                 298
                            131pp;
                                                                                                                                                                 ΰ
                                                                                                                                                                                                                                                                x AAS12179
                                                                                                                                                                                           4.85e-142
1422.00
98.31%
97.97%
67.55%
                                                                                                                                                                 168 A; 304
                             -53;
                             25
                                                                                                                                                                                                                                                                 (1-405)
                                                                                                                                                                                                     Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                             Page
New polypeptide,
inward potassium
                                                                                                                                                                 956 BP;
                             18;
                                                                                                                                                                                   Alignment Scores
Pred. No.:
                                                                                                                                                                                                                                                                 ß
                                                                                                                                                                                                                                                                US-09-939-483-
                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                      99
                                                                                                                                                                                                                                                                                                                                            126
                                                                                                                                                                                                                                                                                                                                                                41
                                                                                                                                                                                                                                                                                                                                                                                  186
                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                            81
                                                                                                                                                                                                                                                                                                                                                                                                                                                              306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                         246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   999
                             Example
```

at

S

uB

```
782
                              260
                                                         280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and
                                                                        902
                                                                                                                                                                                       Human; TWIK-9; gene; ss; ion channel family; ICF; cancer; leukaemia;
Alzheimer's disease; Parkinson's disease; multiple sclerosis; epilepsy
hepatic disorder; cardiovascular disorder; cytostatic; neuroprotective
nootropic; antiparkinsonian; hepatotropic; cardiovascular.
                             gAlaLeu
||||||||
|CGCCCTG
           CGTGGTG
                                                                     TAGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ful for
disease
                                                          erLeu
  uValVal
                                                         proteins, user,
   ē,
        Bul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       , TWIK-7, IC23927, TWIK-8, IC47611, IC47615, HNMDA-1, delta-4, 54414, or 53763 nucleic acids and proteins, uting, diagnosing and treating e.g. cancers, Alzheimer, vascular disorders.
eGlyAlaPhereuA
                                                                                      H
 LeuThrGlyLeuThrValil
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Santiago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             42; 638pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Silos-
                                                                                                                                                                          region.
                                                                                                                                П
                                                                                                                                                                                                                                                                                  2000US-00515520.
2000US-0185938P.
2000US-0195734P.
2000US-0195993P.
2000US-0195993P.
2000US-0235018P.
2000US-0235018P.
2000US-0235018P.
2000US-0235018P.
2000US-0235018P.
2000US-0235018P.
2000US-0235018P.
2001US-00956588P.
2001US-00828035.
2001US-00843128.
2001US-00843128.
2001US-00957683.
2001US-00964252.
                                                                                                                                112
                                                                                                                                                                                                                                                                      2002US-00146733
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Æ,
                                                                                                                                                             entry)
                                                                                                                                                                          coding
                                                                                                                                                                                                                                                                                                                                                                                                                                         PHARM
                                                                                                                                CDNA;
  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Glucksmann
                                                                                     ValA
PheValTy
                                                                                                                                                            (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2004-069000/07
P-PSDB; ADI27948.
                                                                                                                                                                                                                                                                                                                                                                                                                                         MILLENNIUM
                                                                                                                                standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ID NO
                                                                                                                                                                          CDNA
                                                                                                                                                                                                                                          US2003165891-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cardiovascular
                                                                                                                                                                                                                                                                                     29-FEB-2000;
03-MAR-2000;
07-APR-2000;
11-APR-2000;
26-APR-2000;
25-SEP-2000;
25-SEP-2000;
25-SEP-2000;
25-SEP-2000;
21-DEC-2000;
28-FEB-2001;
06-APR-2001;
11-APR-2001;
25-SEP-2001;
25-SEP-2001;
25-SEP-2001;
25-SEP-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ
                                                                                                                                                                          TWIK-9
                                                                                                                                                                                                                            sapiens
                                                                                                                                                                                                                                                                      -MAY-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       RAJ,
                                                                                                                                                            -MAY-2004
                                                                                                                                                                                                                                                        04-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         preventing,
              725
                             241
                                           783
                                                                       843
                                                                                                    903
                                                                                                                                ADI27949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1;
                                                                                      281
                                                                                                                                              ADI27949
                                                         261
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Curtis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TWIK-6,
alpha2d
                                                                                                                                                                          Human
                                                                                                                                                                                                                            Homo
                                                                                                                   വ വ
                                                                                                                          ADI2794
                                                                                                                   RESULT
                                                                                                                                      d
                                          원
                                                                       d
                                                                                                                                Π
                             à
                                                                                      ठ
 ò
                                                         ò
```

```
The invention relates to TWIK-6, TWIK-7, IC23927, TWIK-8, IC47611,

IC47615, HNMDA-1, TWIK-9, alpha-2delta-4, 54414 and 53763 ion channel
family (ICF) nucleic acids and proteins. The TWIK-6, TWIK-7, IC23927,

TWIK-8, IC47611, IC47615, HNMDA-1, TWIK-9, alpha-2delta-4, 54414 and
53763 ICF nucleic acids and proteins may be used for preventing,
c diagnosing and treating ICF-related diseases. The sequences may be used
to treat disorders associated with decreased expression by rectifying
mutations or deletions in a patient's genome that affect the activity of
ICF proteins by expressing inactive proteins or to supplement the
ICF proteins by expressing inactive proteins may also be used as
antigens in the production of ICF proteins. The proteins may also be
c antigens in the production of antibodies against ICF proteins and in
assays to identify modulators of ICF protein expression and activity. The
antigens in the production and activity. The antibodies may be used
c anti-ICF protein expression and activity. The antibodies may be used
c samples (e.g. by immunoassay). The nucleic acids and proteins may be used
to prevent, diagnose and treat a wide variety of disorders, e.g. cancers
and leukaemia, Alzheimer's disease, multiple
and leukaemia, Alzheimer's disease, multiple
c sclerosis, epilepsy, hepatic disorders and cardiovascular disorders.
c sequence represents cDNA encoding the human TWIK-9 protein of the
invention. Note: The sequence data for this patent is also available in
c electronic format from USPTO at seqdata.uspto.gov/sequence.tml.
                                                                                                                                                                                                                   nseq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                       aB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               40
                                                                                                           of
                                                                                                                                                                                          also be
                                                                                                                                                                                                                                  cancers
                                                                                nsed
                                                                                                                                                                                                                                                                                      in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Met PheGlnSerLeuGlyGluArgIleAsnThrPheValArgTyrLeuLeuHisArgAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PheValSerCys11eSerThrLeuCys11eGlyAlaAlaAlaPheSerTyrTyrGluArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ArgGlnLeuGluLeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGluLeuGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                eugjuserGluProgjuMetIlegjuArgGlnArgi
                                                                                                                                                                                                                                                                                                                             0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                1122
229
48
86
50
                                                                                                                                                                                                                                                                                                                                                                                              Conservative Mismatches:
                                                                                                                                                                                                                                                                                                                            Η,
                                                                                                                                                                                                                                                                                                                             318 G; 230
                                                                                                                                                                                                                                                                                                                                                                                 Matches:
                                                                                                                                                                                                                                                                                                                                                                      Length:
                                                                                                                                                                                                                                                                                                                                                                                                                          Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-1122)
                                                                                                                                                                                                                                                                                                                            ;
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                x ADI27949
                                                                                                                                                                                                                                                                                                                                                                  1.88e-107
1100.00
67.07%
55.45%
52.26%
                                                                                                                                                                                                                                                                                                                             226 A; 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AlaValPheAspAlaL
                                                                                                                                                                                                                                                                                                                            BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-939-483-5 (1-405)
                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity
Query Match:
                                                                                                                                                                                                                                                                                                                             Sequence 1122
                                                                                                                                                                                                                                                                                                                                                        Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          490
                                                                                                                                                                                                                                                                                                                                                                   . No. :
                                                                                                                                                                                                                                                                                                                                                        gnment
                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                     Aligr
Pred
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
```

200

TrpThrPhePheGlnAlaTyrTyrTyrCysPheIleThrLeuThrThrIleGlyPheGly

181

ð

· rng

2000WO-

```
1083
                         220
                                         699
                                                          240
                                                                                           260
                                                                                                                            280
                                                                                                                                                                             852
                                                                                                                                                                                              320
                                                                                                                                                                                                                               340
                                                                                                                                                                                                                                                                356
                                                                                                                                                                                                                                                                                                 372
          609
                                                                          729
                                                                                                           789
                                                                                                                                                             300
                                                                                                                                                                                                               888
                                                                                                                                                                                                                                                σ
                                                                                                                                                                                                                                                                                 999
                                                                                                                                                                                                                                                                                                                                  392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      pression;
                                     GCCTTT
                                                                                          --TATGGCGGCCGCTCGGTGGCA
                                                                                                                                                                                                                                                                                                                  -ACA
                                                                                                                                                                                                                                                                                                                                IAlaPhe
                                                                                                                             SerLeu
                                                                                                                                            -- AGCATGGTCATTCACATCCCT
                                                                                                                                                                                                                               tileile
                                                                                                                                                                                                                                                                                                  вРгосув
                                                                                                                                                                                                                                                                                 TACAAG
                                                                                                                                                             GlyVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; DKCN1; potassium channel; cancer; pulmonary disease; depressivatiovascular disease; inflammatory disease; renal disease; pain; psychiatric disorder; schizophrenia; neurodegenerative disease; Alzheimer's disease; neurological disorder; migraine; epilepsy; sleep-related disorder; erectile dysfunction; alopecia; ss.
                                                                                                                                                           GlyAspValArqProArgAspProValThrCysAlaAlaAlaAlaGlyGlyVal
                                                                                                                                                                                                                                                                          euThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuSerGly
                                                                                                                                                                                                                              CysserCysLeuTrpTyrLysSerArgGluLysLeuGlnTyrSerIleProMe
                      AspTyrValAlaLeuGlnLysAspGlnAlaLeuGlnThrGlnProGlnTyrVa
                                                                                                                                                                                                                                                                                                 -SerProGlyGlyGlyArgTyrSerAspThrProSerHi
                                    ProArgAspLeuSerThrSerAspThrCysValGluHisSerHisSer
                                                                                                                                                                                                                                                                                                                                                                            gArgSerSerVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "DKCN1 polypeptide
                                                                                                                                                                                                                                         |||||||||||
TGCTCCTGCACCTGCTACCGCTCGCAGGAC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a human DKCN1 polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
1. .1125
                                                                                                                                                                            cascasccscicicicasccsscici
                                                                                                                                                                                                                                                                                                                                                                   euMetLy
                                                                                                                                                                                                                                                                                                            |||||||
| ATCGAGGAGATCTCACCAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                     1125
                                                                                                                                            CTCGCCGGAAACCGCAAC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        , cag= a
/product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                      entry)
                                                                                                                                                                                                                                                                                                                                                                   AlaalaPheArgGlyL
                                                                                                                                                                                                                                                                                                                                                                                                                    CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .11
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first
                                                                                                                                                                                                                                                                                                                                                                                                                    standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200053628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-JAN-2001
          550
                                                                                                           730
                                                                                                                                             790
                                                                                                                                                                                                                                                                                                                  000
                                                                                                                                                                                                                                                                                                                                                                                   1084
                                         610
                                                                          670
                                                                                                                                                                             829
                                                                                                                                                                                                                                                889
                                                                                                                                                                                                                                                                 341
                                                                                                                                                                                                                                                                                                                                                  1024
                                                                                                                                                                                                                                                                                                                                                                   393
                         201
                                                          221
                                                                                            241
                                                                                                                             261
                                                                                                                                                             281
                                                                                                                                                                                              301
                                                                                                                                                                                                               853
                                                                                                                                                                                                                               321
                                                                                                                                                                                                                                                                                 940
                                                                                                                                                                                                                                                                                                                                  373
                                                                                                                                                                                                                                                                                                                                                                                                                     AAA75886
                                                                                                                                                                                                                                                                                                 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ношо
                                                                                                                                                                                                                                                                                                                                                                                                          AAA7588
                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                            <del>Q</del>
                                                                          a
                                                                                                          g
                                                                                                                                                                            유
                                                                                                                                                                                                              d
                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                 а
                                                                                                                                                                                                                                                                                                                                                 셤
                         8
                                                          ð
                                                                                           ઠે
                                                                                                                            ઠે
                                                                                                                                            유
                                                                                                                                                             ð
                                                                                                                                                                                              8
                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                     DH
```

```
Polypeptides and polynucleotides of the potassium channel family, useful for identifying agonists/antagonists of therapeutic use and diagnosis and treatment of cancer, pulmonary, cardiovascular, inflammatory and renal disease.
                                                                                                                                                                                                   The present sequence encodes a human DKCN1 polypeptide. The polypeptide is a member of the potassium channel family. The DKCN1 polypeptides and polynucleotides are useful for treating diseases including cancer, pulmonary, cardiovascular, inflammatory or renal diseases, pain, psychiatric disorders including depression and schizophrenia, neurodegenerative disease including Alzheimer's, neurological disorders, migraine, epilepsy, sleep-related disorders, erectile dysfunction and alopecia. DKCN1 polynucleotides are useful as diagnostic reagents for detecting mutations in the associated gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGGAGATCCGGATCAAGGGGAAGTACAACATCAGCAGCGAGGAGGACTACCGGCAGCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MetPheGlnSerLeuGlyGluArgIleAsnThrPheValArgTyrLeuLeuHisArgAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        euGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LysArgGlyLeuGlyMetArgHisAlaGluValSerMetAlaAsnMetValLeuIleGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rGluGluL
                                                                                                                                                                                                                                                                                                         Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ArgGlnLeuGluLeuArgAlaArgTyrAsnLeuSerGluGlyGlyTy
                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                     11125
2229
448
86
50
50
                                                                                                                                                                                                                                                                                                         ä
                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                         Ë
                                                                                                                                                                                                                                                                                                         230
                                                                                                                                                                                                                                                                                                         .
Ö
                                                                               ខ្ល
                                                                                                                                                                                                                                                                                                                                                                                                           (1-1125)
                                                                                                                                                                                                                                                                                                         319
                                                                               Chapman
                                                                                                                                                                                                                                                                                                         ວິ
                                                                                                                                                                                  25; 36pp; English
                                                           PLC
                                                                                                                                                                                                                                                                                                                                                                                                           AAA75886
                                                                                                                                                                                                                                                                                                                                    1.89e-107
1100.00
67.07%
55.45%
52.26%
                                                                                                                                                                                                                                                                                                         349
                             99GB-00005061
2000GB-00003112
                                                           BEECHAM
                                                                               RJ,
                                                                                                                                                                                                                                                                                                         Ą;
                                                                                                                                                                                                                                                                                                         227
                                                                                                                                                                                                                                                                                                                                                                                                             ×
                                                                                                  2000-587424/55
                                                           SMITHKLINE
                                                                                                                                                                                                                                                                                                                                                                                                            (1-405)
                                                                                                                                                                                                                                                                                                         BP
                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity
Query Match:
                                                                                                  WPI; 2000-587424
P-PSDB; AAB18807
                                                                                                                                                                                                                                                                                                         1125
                                                                                                                                                                                  4; Page
                                                                               Ä,
                            5-MAR-1999;
0-FEB-2000;
                                                                                                                                                                                                                                                                                                                             Scores:
                                                                                                                                                                                                                                                                                                                                                                                                            -939-483-5
                                                                               Duckworth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                370
                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                  10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                           (SMIK)
                                                                                                                                                                                  Claim
                                                                                                                                                                                                                                                                                                                                        ..
80
                                                                                                                                                                                                                                                                                                                             Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                Score
                                                                                                                                                                                                                                                                                                                                                                                                             0S-09
d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
```

100

249

80

129

40

189

9

120

369

140

429

160

489

430

```
1023
                                                                                                                                                                                                                                                                                                                                                                                                                   1083
                                                                                                                                                                                                                   300
                   549
                                     200
                                                      609
                                                                       220
                                                                                         699
                                                                                                          240
                                                                                                                            729
                                                                                                                                             260
                                                                                                                                                               789
                                                                                                                                                                                280
                                                                                                                                                                                                  828
                                                                                                                                                                                                                                    852
                                                                                                                                                                                                                                                      320
                                                                                                                                                                                                                                                                         888
                                                                                                                                                                                                                                                                                         340
                                                                                                                                                                                                                                                                                                                            356
                                                                                                                                                                                                                                                                                                                                                               372
                                                                                                                                                                                                                                                                                                           939
                                                                                                                                                                                                                                                                                                                                                                                                 392
                                                                                                                                                                                                                                                                                                                                              σ
                                                                                                                                                                                                                                                                                                                                              99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           er;
:lerosis;
:etes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               stroke;
                                                   GTTCGGG
PheValSerCysIleSerThrLeuCysIleGlyAlaAlaAlaPheSerTyrTyrGluArg
||| |||||||||||
|TCTTCTCCTGCATGGGACGCTGTGCATCGGGGCCGCCGCTTCTCCCAGTGTGAGGAG
                                                                                                                       GTCGTC
                                                                                                                                                                                                                                                                                                     SGTGGCA
                                                                                                                                            -AGGTACAAGGCGGACGTCCCGGACCTGCAGTCTGTG
                                                                       AlaPhe
                                                                                                        SerPheValTyrIleLeuThrGlyLeuThrValIleGlyAlaPheLeuAsnLeuValVal
                                                                                                                                                                                                ATCCCT
                                                                                                                                                                                                                                                                                                                                                               ProCys
                                                                                                                                                                                                                                                                                                                                                                                                 Serren
                                                                                                                                                                                                                                                                                                                                                                                                                   AGCTTT
                                                                                         SCCTTT
                                                                                                                                                                                Serren
                                                                                                                                                                                                                                                      SerMet
                                                                                                                                                                                                                                                                                         Ilelle
                                                                                                                                                                                                                                                                                                                                                                                ---ACA
                                                                                                                                                                                                                   GlyVal
                                     yPheG1y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; potassium channel protein; KCNB; breast tissue; cancer; potassium channel-associated disorder; brain associated disorde epilepsy; Alzheimer's disease; Parkinson's disease; multiple sc migraine; psychiatric disorder; depression; schizophrenia; diab bipolar disease; heart disease; arrhythmia; pancreas disease; pancreatitis; ss.
                                  AspTyrvalAlaLeuGlnLysAspGlnAlaLeuGlnThrGlnProGlnTyrval
                                                                                 -AGCATGGTCATTCAC
                                                                                                                                                                                                                                                                                        euThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuSerGly
                                                                                                                                                                                                                  GlyAspValArgProArgAspProValThrCysAlaAlaAlaAlaGlyGlyVal
                                                                                                                                                                                                                                                                                                                                                              SerProGlyGlyGlyAlyArgTyrSerAspThrProSerHis
                                                                                                                  euHi
                                                                                                                                                                                                                                                     GlyValGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein KCNB
                                                                                                                                                                                                                                                                                                                                                                                            erValSerThrGlyL
                                                                                                                                                                                                                                                                                                                           ProArgAspLeuSerThrSerAspThrCysValGluHisSerHisSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1122
                                                                                                                                                                                                                                                                                                                                                                                                                                    405
                                                                                                                                                                                                                                                                                                                                                                                                                                    erVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                   acceaccacagecreargaaaccececaagececi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             channel
                                                                                                                                                                                                                                                                                                                                                                                                 erS
                                                                                                                                                                                                                                                                                                                                                                                                                                   sArgArgSerS
                                                                                                                                                                                                                                                                                                                                                                                                LeuCysSerGlyThrGlnArgSerAlaileS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of human potassium
                                                                                                                                                                                                                                    GAGGAGCCGCGGCCCAGCCGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                   AlaAlaPheArgGlyLeuMetLy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ВР
                                                                                                                                                                                                                                                                                                                                                                              ATCGAGGAGATCTCACCAAGC-
                                                                                                                                                                                                crcecceanaccecanc-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nucleotide sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        standard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                               1000
                  490
                                                      550
                                                                                       610
                                                                                                                          670
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1084
 161
                                    181
                                                                      201
                                                                                                                                            241
                                                                                                                                                              730
                                                                                                                                                                               261
                                                                                                                                                                                                 790
                                                                                                                                                                                                                                    829
                                                                                                                                                                                                                                                                                         321
                                                                                                                                                                                                                                                                                                                            341
                                                                                                                                                                                                                                                                                                                                             940
                                                                                                         221
                                                                                                                                                                                                                  281
                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                       853
                                                                                                                                                                                                                                                                                                                                                              357
                                                                                                                                                                                                                                                                                                                                                                                                 373
                                                                                                                                                                                                                                                                                                                                                                                                                                    393
                                                                                                                                                                                                                                                                                                          Φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAH74999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAH74999
                                                                                                                                                                                                                                                                                                          88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAH749
                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                       임
                                                                                                                                                                                                                                                                                                                                            а
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                      ð
                                                                                       셤
                                                                                                                                            ò
                                                                                                                                                            a
                                                                                                                                                                               ઠે
                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                 日
                                                                                                         ò
                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                    요
                                                                                                                                                                                                                                                                                                                                                                                                                                   à
```

```
The present sequence encodes a human potassium channel protein, termed KCNB. KCNB is expressed in breast tissue. The KCNB polypeptides are useful for identifying a compound that modulates its activity. The KCNB polypeptide and nucleic acid are useful for detecting cancer cells in biological samples. The inhibitor of the potassium channel polypeptide is polypeptide is useful for inhibiting proliferation of a cancer cell and for treating a potassium channel-associated disorder. The KCNB nucleic acids, proteins, and/or antibodies are useful in the diagnosis or prognosis, or treatment of diseases are cancer, brain associated disorders (such as epilepsy, Alzheimer's disease, Parkinson's disease, stroke, multiple sclerosis, migraine), psychiatric disorders (such a depression, schizophrenia, bipolar diseases) and diseases related to the heart (such as and arrhythmias), diseases related to pancreas (such as pancreatitis and arrhythmias), diseases related to pancreas (such as pancreatitis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AlavalPheAspAlaLeuGluSerGluProGluMetIleGluArgGlnArgLeuGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlyHisAlaAlaProSerThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ArgGlnLeuGluLeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGluLeuGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JeuvalGlyAla
                                                                                                                                                                                                                                            A nucleic acid encoding a potassium channel, termed KCNB (potassium channel expressed in breast), useful in the diagnosis, prognosis or treatment of diseases associated with altered KCNB activity or expression, e.g. cancer and diabetes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             U; 0 Other;
                          KCNB"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1125
229
48
86
50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ŧ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     alleThrVallleThrThrlleGly
                          channel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C; 319 G; 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (1-1125)
                         "potassium
                                                                                                                                                                                                                                                                                                            79-80; 82pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.89e-107
1100.00
67.07%
55.45%
52.26%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         x AAH74999
                                                                                                     2001WO-US006801
                                                                                                                            2000US-0186915P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             227 A; 348

    1125
    *tag= a
    /product=

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PheTyrPheAl
                                                                                                                                                                                                       WPI; 2001-522949/57
P-PSDB; AAG63938.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (1-405)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BP;
                                                                                                                                                                                                                                                                                   e.g.
                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity
                                                                                                                                                      TULARIK
                                                  WO200166741-A2
                                                                                                                                                                                                                                                                                                           Claim 6; Page
                                                                                                                                                                                Powers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1125
                                                                                                                           03-MAR-2000;
                                                                                                  02-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
Pred. No.:
                                                                           13-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-939-483-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                     (TULA-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
DB:
                                                                                                                                                                               Ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score:
d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
```

249

80

9

40

69

309

Location/Qualifier

Key

g

```
1023
                                                                                                                                                                                                                                                                                                                                                                1083
 120
                                     429
                                                  160
                                                                                      549
                                                                                                  200
                                                                                                                          220
                                                                                                                                                              729
                                                                                                                                                                                                              828
             369
                                                              489
                                                                          180
                                                                                                              609
                                                                                                                                      699
                                                                                                                                                   240
                                                                                                                                                                           260
                                                                                                                                                                                       789
                                                                                                                                                                                                   280
                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                   320
                                                                                                                                                                                                                                                                                                    356
                                                                                                                                                                                                                                       852
                                                                                                                                                                                                                                                                888
                                                                                                                                                                                                                                                                           340
                                                                                                                                                                                                                                                                                        939
                                                                                                                                                                                                                                                                                                               999
                                                                                                                                                                                                                                                                                                                            372
                                                                                                                                                                                                                                                                                                                                                    392
                       Met PheGlnSerLeuGlyGluArgIleAsnThrPheValArgTyrLeuLeuHisArgAla
                                                                        PhevalSerCysIleSerThrLeuCysIleGlyAlaAlaAlaPheSerTyrTyrGluArg
            ACTGGTC
                                                                                                                                  GGCCTTT
                                                                                                                                                                         GGTCGTC
                                                                                                                                                                                                                                                                                                                                                                CAGCTTT
  rLeuIle
                                                                                                                          lAlaPhe
                                                                                                                                                                                                   ySerLeu
                                                                                                                                                                                                              --AGCATGGTCATTCACATCCCT
                                                                                                                                                                                                                                                          --AGGTACAAGGCGGACGTCCCGGACCTGCAGTCTGTG
                                                                                                                                                                                                                                                                           tileile
                                                                                                                                                                                                                                                                                                         sProCys
                                                                                                                                                                                                                                                                                                                                        --ACA
                                                                                                                                                                                                                                                                                                                                                    erLeu
                                                                                                                                                                                                                                                    nSerMet
                                                                                                                                                                                                                                                                                   --TATGGCGGCCGCTCGGTGGCA
                                                                                                                                                  uValVal
                                                                                                                                                                                                                           lGlyVal
SerPheValTyrIleLeuThrGlyLeuThrValIleGlyAlaPheLeuAsnLe
|||||||:::||||||||||
AGCTTTATGTATATCCTGGTGGGCTGACGGTCATCGGGGCCTTCCTCAACCT
                                                                                                                                                                                                                         GlyAspValArgProArgAspProValThrCysAlaAlaAlaAlaGlyGlyVa.
                                                                                                                                                                                                                                                                          LeuThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuSerGl
                                                                                                                                                                                                                                                                                                                           SerProGlyGlyGlyArgTyrSerAspThrProSerHi
                                                                                                                                                                                                                                                   GlyValGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGl
                                                                                                                                                                                                                                                                                                  ProArgAspLeuSerThrSerAspThrCysValGluHisSerHisSer-
                                                                                                                                                                                                                                                                                                                                                                            405
                                                                                                                                                                                                                                                                                                                                                                           ВР
                                                                                                                                                                                                              creecegaaacesaac----
                                                                                                                                                                                                                                                                                                                                       ATCGAGGAGATCTCACCAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                          entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                         (first
                                                                                                                                                                                                                                                                                                                                                                                                                 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                         11-MAR-2004
                         121
            310
                                    370
                                                                                                                                                                                                                                                                                                                                                                                        1084
                                                 141
                                                             430
                                                                                                             550
                                                                                                                                                              670
                                                                                                                                                                                                                                                                                                               940
                                                                                                                                                                                                                                                                                                                                        000
101
                                                                         161
                                                                                     490
                                                                                                                                                                                      730
                                                                                                                                                                                                                                                                                       889
                                                                                                 181
                                                                                                                          201
                                                                                                                                      610
                                                                                                                                                                          241
                                                                                                                                                                                                  261
                                                                                                                                                                                                              790
                                                                                                                                                                                                                                                                                                                                                                             393
                                                                                                                                                  221
                                                                                                                                                                                                                           281
                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                           321
                                                                                                                                                                                                                                                                                                   341
                                                                                                                                                                                                                                                                                                                                                                                                                ADH34472
                                                                                                                                                                                                                                                                                                                           357
                                                                                                                                                                                                                                                                                                                                                                                                     8 0
                                                                                                                                                                                                                                                                                                                                                                                                   RESULT {
                                                                                                                                                                                                                                                                                                                                                                                                                 SAXEX
           a
                                    원
                                                             유
                                                                        ò
                                                                                     유
                                                                                                                                                             d
                                                                                                                                                                         δ
                                                                                                                                                                                      g
                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                               원
                                                                                                                                                                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                                                                                                               g
                        8
                                                 δ
                                                                                                 ò
                                                                                                            8
                                                                                                                                    a
                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                         ठ
                                                                                                                                                 ठे
                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                          ठे
```

```
88
                                                                                                                                                                     oligonucleotide"
                                                                                                                                                                                                            oligonucleotide"
                                                                                                                                                                                                                                                                                                oligonucleotide"
                                                                                                                                                                                                                                                                                                                                          antisense oligonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                                                            oligonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      oligonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                oligonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antisense oligonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           antisense oligonucleotide"
                                                                                                                                                                                                                                                        oligonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                     oligonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          oligonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     oligonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             oligonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        oligonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              oligonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     oligonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        oligonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           oligonucleotide
                                                                       gene
                         Human; TASK-3; potassium channel; K+ channel; outwardly rectifying; acid-sensitive; central nervous system; nociception; chronic pain; diabetic neuropathy; postherpetic neuralgia; fibromyalgia; surgery; chronic back pain; analgesic; gene therapy; antisense therapy; gene
                                                                                                                                                                                                               antisense
                                                                                                                                                                                                                                                                                                  antisense
                                                                                                                                                                                                                                                                                                                                                                                    antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antisense
                                                                                                                                                                      antisense
                                                                                                                                                                                                                                                        antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              antisense
                                                                                                                                                                                                                                                                                                                                                                                                                              antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antisense
 CDNA
                                                                                                                                                                      TASK-3
                                                                                                                                                                                                              TASK-3
                                                                                                                                                                                                                                                        TASK-3
                                                                                                                                                                                                                                                                                                  TASK-3
                                                                                                                                                                                                                                                                                                                                          "Human TASK-3
                                                                                                                                                                                                                                                                                                                                                                                     "Human TASK-3
                                                                                                                                                                                                                                                                                                                                                                                                                             TASK-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TASK-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TASK-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TASK-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TASK-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TASK-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TASK-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TASK-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TASK-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TASK-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TASK-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TASK-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TASK-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TASK-3
TASK-3-encoding
                                                                                                                                                                      "Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Human
                                                                                                                                                                                                               "Human
                                                                                                                                                                                                                                                        "Human
                                                                                                                                                                                                                                                                                                  "Human
                                                                                                                                                                                                                                                                                                                                                                                                                              "Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Human
                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nd moiety=
                                                                                                                                                                                                                                                                                                                                                                                  nd_moiety= .489
                                                                                                                                                                                                                                                                                                                                                                                                                       ⇒
moiety=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                id moiety=
                                                                                                                                                                                                               moiety=
                                                                                                                                                                                                                                                        moiety=
                                                                                                                                                                                                                                                                                                moiety=
                                                                                                                                                                                                                                                                                                                                          moiety=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       moiety=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   moiety=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            moiety=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         _moiety=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         moiety=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      moiety=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        moiety=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      moiety=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                moiety=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _moiety=
                                                                                                                                                                   nd_moiety=
.156
y= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1_moiety=
.1116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /bound mo1
595. .615
                                                                                                                                                                                                                          .194
                                                                                                                                                                                                                                                                   . 240
                                                                                                                                                                                                                                                                                                          .322
                                                                                                                                                                                                                                                                                                                                                          .443
                                                                                                                                                                                                                                                                                                                                                                                                                                          .512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . <u>6</u>96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .<u>8</u>06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .711
                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                               Φ
                                                                                                                                                                                                                                                                                                                                                                                                                  Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ט
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E
Human potassium channel
                                                                                                                                           . 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       685. .6
/*tag≔
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *tag=
                                                                                                                                         55. .7(
/*tag=
/bound_
                                                                                                                                                                                                                                                       /bound
226.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag=
                                                                                                                                                                                                                                                                        26. .;
*tag=
                                                                                                                                                                                                                                                                                                 ponnoq,
                                                                                                                                                                                                                                                                                                                                                                      /*tag=
/bound_
                                                                                                                                                                                                                                                                                                                                                                                                               *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                            punoq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bound,
                                                                                                                                                                                  101. ./*tag=
                                                                                                                                                                                                                                        *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 641. .(
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bound/
                                                                                                                                                                                                               ponnoq
                                                                                                                                                                                                                                                                                                              .05.
*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *tag=
                                                                                                                                                                                                                                                                                                                                          ponnoq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ponnoq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            punoq,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ponnoq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                           *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ponnoq,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ponnoq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ponnq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            bound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ponnoq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1108.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             088.
                                                                                                                                                                                                                                                                                                                                                                                                                                           .00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     91.
                                                                                                                                                                                                                           63.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    986
                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                σ
                                                                                                Homo sapiens
                                                                                                                                        misc_binding
                                                                                                                                                                                 misc_binding
                                                                                                                                                                                                                           misc_binding
                                                                                                                                                                                                                                                                   misc_binding
                                                                                                                                                                                                                                                                                                             misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc binding
                                                                                                                                                                                                                                                                                                                                                         misc binding
                                                                                                                                                                                                                                                                                                                                                                                                  misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_binding
PET THE FET TH
```

oligonucleotide"

antisense

TASK-3

"Human

\_moiety=

/bound

9

0

σ

89

D

S

3  $\infty$ 4

```
.T 9
1998
AAD21998
                                                                                                                                                                                                                    670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1000
                            370
                                                                                     161
                                                                                                                                                                                                                                                                                                                                                                                                                                                   940
                                                                 430
                                                                                                                                                                                 610
                                                                                                                                                                                                    221
                                                                                                                                                                                                                                                          730
                                                                                                                                                                                                                                                                             261
                                                                                                                                                                                                                                                                                               790
                                                                                                                                                                                                                                                                                                                  281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               393
          121
                                                                                                       490
                                                                                                                          181
                                                                                                                                           550
                                                                                                                                                                                                                                                                                                                                                                         853
                                                                                                                                                                                                                                                                                                                                                                                           321
                                                                                                                                                                                                                                                                                                                                                                                                             889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESUL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      임
                                                                                                                                           d
                                                                                                                                                                                셤
                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                       ద
                                                                                                                                                                                                                                                                                                                                                                                                            ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                   d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                 ద
                                                                                                      ద
                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                  ò
                                                                                                                                                              ò
                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                               8
                                                                                                                          8
                                                                                                                                                                                                        The invention relates to antisense oligonucleotides 10-50 bases in length targeted to rat or human TASK-3 mRNA (corresponding cDNAs shown in ADH34471-ADH34472). TASK-3 is an outwardly rectifying acid-sensitive optassium channel which is regulated by extracellular pH. It is mainly expressed in central nervous system tissue in regions implicated in nociception and chronic pain, indicating that it may have a role in pain ociception and chronic pain, indicating that it may have a role in pain sensation. The invention also relates to compositions comprising the antisense oligonucleotides; a nucleic acid construct and host cell comprising a regulatory element operably linked to a nucleic acid molecule that can be transcribed to form an antisense RNA; use of the antisense oligonucleotides in decreasing TASK-3 production; and a method of screening for compounds that modulate TASK-3 expression. The antisense coligonucleotides and compounds are useful for modulating pain, preferably from diabetic neuropathy, postherpetic neuralgia, fibromyalgia, surgery, or chronic back pain. The present sequence represents human TASK-3 cDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           laGlySer
||||||||
ccGccrcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |:::
CAAAGCC
                                                                                                                                           with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    aProSerThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AlavalPheAspAlaLeuGluSerGluProGluMetIleGluArgGlnArgLeuGluLeu
                                                                                                                                            ជី ខ្ល
                                                                                                                                          New isolated antisense oligonucleotides specifically hybridizin
accessible region of TASK-3 mRNA, useful for modulating pain fr
diabetic neuropathy, postherpetic neuralgia, fibromyalgia, surg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTCTACTTTGCGATCACGGTCATCACCACCATAGGTTATGGGCACGCTGCACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ArgvalValLeuArgLeuLysProHisLysAlaGlyValGlnTrpArgPheAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  aAl
                                                                                                                                                                                                                                                                                                                                                                Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rGlyHie
                                                                                                                                                                                                                                                                                                                                                                                        1125
229
48
86
50
                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                               ů;
                                                                                                       Ħ
                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                       Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  eGly.
                                                                                                                                                                                                                                                                                                                                                                G; 231
                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                            Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  eThrThrIl
                                                                                                       ĽS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            (1-1125)
                                                                                                                                                                                           ID NO 2; 37pp; English.
                                                                                                                                                                                                                                                                                                                                                               319
                                                                                                       Stone
                                                                                                                                                                                                                                                                                                                                                               ່ວ
                                                                                     INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  alleThrVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                            x ADH34472
                                                                                                                                                                                                                                                                                                                                                                                         1.89e-107
1100.00
67.07%
55.45%
52.26%
                                                                                                                                                                                                                                                                                                                                                                348
                                               2002WO-US041834
                                                                 2001US-0346070P
                                                                                                       SNG,
                                                                                    (ALGO-) ALGOS THERAPEUTICS
                                                                                                                                                                                                                                                                                                                                                               A;
                                                                                                      Arvidsson
                                                                                                                                                                                                                                                                                                                                                               227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PheTyrPheAl
                                                                                                                         WPI; 2003-587116/55
                                                                                                                                                                       back pain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-939-483-5 (1-405)
                                                                                                                                                                                                                                                                                                                                                               BP;
                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity
          WO2003057846-A2
                                                                                                                                                                                                                                                                                                                                                               1125
                                                                                                                                                                                           SEO
                                                                31-DEC-2001;
                                              31-DEC-2002;
                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
Pred. No.:
                                                                                                       SJ,
                            17-JUL-2003
                                                                                                                                                                                           4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         310
                                                                                                                                                                                                                                                                                                                                                                Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81
                                                                                                                                                                        chronic
                                                                                                      Shuster
                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
DB:
                                                                                                                                                                                          Claim
                                                                                                                                                                                                                                                                                                                                                                                                     Score
엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      а
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ਨੇ
```

```
240
                                                                                                                            729
                                                                                                                                                                                                           320
                                                                                                                                                                                                                                 340
                                                                                                                                                                                                                                                                   999
                                             180
                                                         549
                                                                    200
                                                                               609
                                                                                           220
                                                                                                      699
                                                                                                                                                              280
                                                                                                                                                                                    300
                                                                                                                                                                                                                      888
                                                                                                                                                                                                                                                                               372
                                                                                                                                                   789
                                                                                                                                                                                                                                TyrLeuLeuHisArgAla
                                            LeuThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuSerGlySerLeu
                                                                                                                                                                                    SerProGlyGlyGlyArgTyrSerAspThrProSerHisProCys
                      --AGCATGGTCATTCACATCCCT
                                                                                                                                                                                                                                                                                                                                                                                                            Ø
                                                                                                                                                                                                                                                                                                                                                                                                           Human; transporter and ion channel; TRICH; akinesia; cystic fibrosis diabetes mellitus; Parkinson's disease; myasthenia gravis; dementia
                                                                                                                                                                                                                                                                                                                            405
                                                                                                                                                                                                                                                                                                                                                                                                CDNA
                                                                                                                                                                                                                                                                                                                            9-
                                                                                                                                                                                                                                                                                                                                                                                                (TRICH)
                                                                                                                                                                                                                                                                                                                                                                                                channels
                                                                                                                                                                                                                                                                                                                                                               \overline{\mathbf{\omega}}
                                                                                                                                                                                                                                                                                          ATCGAGGAGATCTCACCAAGC-
                                                                                                                                                                          CTCGCCGGAAACCGCAAC-
                                                                                                                                                                                                                                                                                                                                                                                                ion
                                                                                                                                                                                                                                                                                                                                                                                     entry)
                                                                                                                                                                                                                                                                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                                                                                                 transporters
                                                                                                                                                                                                                                                                                                                                                              standard
```

52

œ

9

9

S

```
The invention relates to human transporters and ion channels (TRICH) and the polynucleotides encoding them. The composition comprising TRICH or agonist of TRICH is useful for treating a disease or condition associated with decreased expression of functional TRICH or condition associated with overexpression of TRICH respectively. The composition comprising Ab is useful for diagnosing a condition of disease associated with expression of TRICH in a subject, where the disorders include a transport disorder such as akinesia, cystic fibrosis, diabetes mellitus, parkinson's disease, myasthenia gravis, cardiac disorders associated with transport e.g. Alzheimer's disease, Wilson's disease, cansociated with transport e.g. Alzheimer's disease, Wilson's disease, colire, addison's disease, Huntington's disease, dementia, multiple sclerosis, bacterial and viral meningitis. TRICH DNA is useful for generating a transcript image of a tissue or cell type, which represents the global pattern of gene expression by a particular tissue or cell type. TRICH DNA is used in gene therapy. The present sequence is human TRICHS CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rological
cardiac disorder; angina; hypertension; myocarditis; hyperglycaemia; neurological disorder; Alzheimer's disease; cataract; infertility; Wilson's disease; schizophrenia; Grave's disease; addison's disease; Huntington's disease; multiple sclerosis; meningitis; hypotensive; cardiant; nootropic; neuroprotective; neuroleptic; ophthalmological; antithyroid; anticonvulsant; goitre; antiinflammatory; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tang YT, Khan FA, Triboule
Baughn MR, Nguyen DB, Poli
P, Kearney L, Walsh RT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          l for
neuro
                                                                                                                                                                              "Human transporters and ion channels
                                                                                                                                                                                                                                                      "Human mature transporters and ion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         transporters and ion channels, useful or preventing disorders of transport, and cell proliferative disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patterson C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5; Page 142-143; 150pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   la1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         , Borowsky ML,
Sanjanwala MS,
, Walia NK, La
                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Raumann BE,
                                                                                                                                                                                                                                                                                                                                                                                    2000US-0195595P.
2000US-0196872P.
2000US-0199020P.
2000US-0200552P.
2000US-0202348P.
2000US-0203495P.
                                                                                                                                                                                                                                                                                                                                                           2001WO-US011206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INC
                                                                                                                                                                                                                                                    /product=
(TRICH)-6"
                                                                                                                                                                  đ
                                                                                                                                                                            /product=
                                                                                                                                                  .1125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INCYTE GENOMICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           or
                                                                                                                                                      *tag=
                                                                                                                                                                                                                           6. ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ن, ي
ري,
                                                                                                                                                                                             75
                                                                                                                                                                                                        *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ypeptides of human gnosing, treating ocle, immunological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Thornton M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2002-017448/02
P-PSDB; AAE13279.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AR, Yao MG
Seilhamer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Greene BD,
                                                                                                                                                                                                                                                                                                 WO200177174-A2
                                                                                                                                                                                                                                                                                                                                                                                                   12-APR-2000;
20-APR-2000;
28-APR-2000;
05-MAY-2000;
11-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Polypeptides
                                                                                                    sapiens
                                                                                                                                                                                                                                                                                                                                                           06-APR-2001;
                                                                                                                                                                                                                       mat_peptide
                                                                                                                                                                                             sig_peptide
                                                                                                                                                                                                                                                                                                                              18-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (INCX-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         muscle,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ľ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gandhi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Reddy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  >
                                                                                                      Ношо
                                                                                                                                 Key
CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yue
```

U; 0 Other;

0 Ť,

260

ö

356

່ວ

A; 381

251

BP;

Sequence 1248

1248 229

Length: Matches:

2.21e-107 1100.00

Alignment Scores: Pred. No.: Score:

```
160
                                                                                                                                                                                     200
                                                                                                                                                                                             609
                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                        260
                                                                                        249
                                                                                                 100
                                                                                                                                                                    180
                                                                                                                                                                            549
                                                                                                                                                                                                                                                         280
                                                                                                         309
                                                                                                                                                                                                      0
                                                                                                                 120
                                                                                                                          69
                                                                                                                                  140
                                                                                                                                                                                                                                                                                           320
                                                                                                                                                                                                                                                                                  52
                                                               9
                                                                               80
                                                                       18
                                              40
                                                                                                                                                            48
                                                                                                                                                                                                                                                 78
                                                                                                                                                                    LeuThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuSerGlySerLeu
                             ||| :::
-AGCATGGTCATTCACATCCCT
                                                                                                                                                                                                                                                                        GlyvalGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGlnSerMet
                                                                                                                                                                                                                                                                                               -AGGTACAAGGCGGACGTCCCGGACCTGCAGTCTGTG
                                                                                                                                                                                                                                                                                                             Φ
                                                                                                                                                                                                                                                                                                            CysSerCysLeuTrpTyrLysSerArgGluLysLeuGlnTyrSerIleProMetIleIl
8 4 8
8 6
5 0 0
5 0
Conservative:
Mismatches:
Indels:
Gaps:
                     (1-1248)
                                                                                                                                                                                                                                                               ||||
|CTCGCCGGAAACCGCAAC---
                     AAD21998
67.07%
55.45%
52.26%
6
                     -483-5 (1-405)
Percent Similarity:
Best Local Similarity
Query Match:
DB:
                                     10
                                                      70
                                                                                61
                                                                                                                                           370
                                                                        130
                                                                                        190
                                                                                                 81
                                                                                                         250
                                                                                                                  101
                                                                                                                           310
                                                                                                                                                            430
                                                                                                                                                                     161
                                                                                                                                                                             490
                                                                                                                                                                                      81
                                                                                                                                                                                                       201
                                                                                                                                                                                                               610
                                                                                                                                                                                                                                670
                                                                                                                                                                                                                                                 730
                                                                                                                                                                                                                                                          261
                                                                                                                                                                                                                                                                  790
                                                                                                                                                                                                                       221
                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                          281
                                                                                                                                                                                                                                                                                                    853
                                                                                                                                                                                                                                                                                                            321
                     Φ
                     -93
                     0S-09
                                                      d
                                                                       a
                                                                                        셤
                                                                                                         원
                                                                                                                          원
                                                                                                                                           g
                                                                                                                                                            В
                                                                                                                                                                             원
                                                                                                                                                                                              g
                                                                                                                                                                                                              d
                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                <del>Q</del>
                                                               ઠે
                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                  d
                                              ò
                                                                                                                                                   ò
                                                                                                                                                                    8
                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                           ð
                                                                                ò
                                                                                                 ठ
                                                                                                                  ठे
                                                                                                                                  ò
                                                                                                                                                                                     8
                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                         ò
```

```
Sequence
                                                                                                                                                                                                                                                                                                                 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     384
                                                                                                                                                                                                                                                                                                                                 21
                                                                                                                                                                                                                                                                                                                                                                  41
                                                                                                                                                                                                                                                                                                                                                                                   144
                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                  204
                                                                                                                                                                                                                                                                                                                                                                                                                                   81
                                                                                                                                                                                                                                                                                                                                                                                                                                                   264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
 system,
                                                                                                                                                                                                                                                      Query Match:
                Claim
                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                      No.:
                                                                                                                                                                                                               gnment
                                                                                                                                                                                                                             Score:
Percent
                                                                                                                                                                                                                                              Best
                                                                                                                                                                                                                      Pred
d
                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                   DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     엄
                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                   ਠੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ਠੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                  1023
                                 666
                                                  372
                                                                                   392
                                                                                                                                                                                                                                       channel
                                                                                                                                                                                                                                                                                disorder
                                                                                                                                                                                                                                                                                                                                                                                          Н
                                                                                                                                                                                                                                               lisorder
                                                                                                                                                                                                                                                                                                therapy
                                                                  -ACA
                                                                                                   CAGCTTT
                                                  ProCys
                                                                                   SerLeu
GTGGCA
                                 TACAAG
                                                                                                                                                                                                                                                                                                                                                                                          claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ខ្មាំ
                                                                                                                                                                                                                                        E
                                                 SerProGlyGlyGlyGlyArgTyrSerAspThrProSerHis
                                                                                                                                                                                                                                  Human; tandem of P domains in a weak inward rectifying potassiu TWIK-9; 56115 protein; central nervous system disorder; sleep d Alzheimer's disease; Parkinson's disease; autonomic function disorder Huntington's disease; hypertension; neuropsychiatric disorder depression; schizophrenia; bipolar affective disorder; cardiac-related disorder; learning cellular proliferation disorder; migration disorder; myocardial infarction; memory disorder; arteriosclerosis; gene amnesia; pain disorder; cancer; prophylaxis; gene; ss.
                                CCGCAGAACTCCTTCAGCGCCAAGCTTGCCCCCCCACTACTTCCACTCCATCTC
                                                                                            P domains in weak inward rectifyirs, 56115, useful for treating centr
TATGGCGGCCGCTCC
                                                                                                                                                                                                                                                                                                                                                                                 TWIK-9 protein"
on is specifically claimed in
                                                                                   erThrGlyL
                ProArgAspLeuSerThrSerAspThrCysValGluHisSerHisSer
                                                                                                                                                                                                                                                                                                                                                                                                                                           TWIK-9 protein"
                                                                                                                                   1122
                                                                                   LeuCysSerGlyThrGlnArgSerAlaileSerServalS
                                                                                                                              ACCGACCACCAGAGGCTGATGAAACGCCGGAAGTCCGTT
                                                                                                                  AlaAlaPheArgGlyLeuMetLysArgArgSerSerVal
                                                                                                                                                                                                                                                                                                                                                                                                                                           "Mature human
TGCTCCTGCACCTGCTACCGCTCGCAGGAC
                                                                                                                                                                                                                                                                                                                                                                                       /note= "This region is
SEQ ID NO:3"
                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                  "Human
                                                                 ATCGAGGAGATCTCACCAAGC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New isolated human tandem of P potassium channel polypeptide,
                                                                                                                                                                     1262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (MILL-) MILLENNIUM PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001WO-US030048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000US-0235059P
                                                                                                                                                                                                                                                                                                                                                                                                                                                  .1262
                                                                                                                                                                                                                                                                                                                                                                                                                                         /product=
1140. .126
                                                                                                                                                                                                      entry)
                                                                                                                                                                                                                                                                                                                                                                         Д
                                                                                                                                                                                                                                                                                                                                                                                                                                  Ъ
                                                                                                                                                                                                                                                                                                                                                                 .1139
                                                                                                                                                                                                                                                                                                                                                                                 product=
                                                                                                                                                                                                                                                                                                                                                                                                                           .1136
                                                                                                                                                                     CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                          .86
                                                                                                                                                                                                                                                                                                                                                                        *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                 *tag=
                                                                                                                                                                                                                                                                                                                                                       *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                 *tag=
                                                                                                                                                                                                                                                                                                                                                  . 14
                                                                                                                                                                                                                                                                                                                                                                  'n,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2002-416481/44
P-PSDB; AAE22989.
                                                                                                                                                                                                     (first
                                                                                                                                                                    standard;
                                                                                                                                                                                                                      CDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200226983-A2
                                                                                                                                                                                                                     TWIK-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-SEP-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S-SEP-2000;
                                                                                                                                                                                                                                                                                                                         sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RAJ;
                                                                                                                                                                                                     -AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                         sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                          mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            04-APR-2002
                                                                                                                                                                                     AAD36247;
                                                                  1000
889
                                940
                                                                                                                   393
                                                                                                                                   1084
                341
                                                 357
                                                                                  373
                                                                                                  1024
                                                                                                                                                                    AAD36247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Curtis
                                                                                                                                                                                                                      Human
                                                                                                                                                                                                                                                                                                                                         Key
5'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                   3'UTR
                                                                                                                                                                                                                                                                                                                         Ношо
                                                                                                                                                                                                                                                                                                                                                                 CDS
                                                                                                                                                    RESULT
                                                                                                                                                             AAD362
d
                                a
a
                                                                ద
                                                                                                  g
                                                                                                                                                                                                            8
                                                 ठे
                                                                                  à
                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    XX
```

```
The invention relates to human tandem of P domains in a weak inward
rectifying potassium channel polypeptides (TWIK-9) termed 56115 and
nucleic acid molecules encoding such polypeptides. Sequences of the
invention are useful for treating TWIK-9-associated or related disorders
such as central nervous system disorders (e.g. Alzheimer's disease,
c e.g., hypertension, sleep disorders, neuropsychiatric disorders (e.g.
depression, schizophrenia), learning or memory disorders (e.g. amnesia),
bipolar affective disorders, cardiac-related disorders (e.g. amnesia),
c arteriosclerosis, myocardial infarction), pain disorders (e.g.
arteriosclerosis, differentiation or migration disorders (e.g.
c cancer) and disorders of tissues in which TWIK-9 protein is predominantly
expressed. They are also useful in screening assays, detection assays
c expressed. Ge.g., diagnostic assays, prognostic assays, monitoring clinical
trials and pharmacogenomics) and in methods of treatment (e.g.
therapeutic and prophylactic). TWIK-9 polynucleotides are used in gene
therapy. The present sequence is human TWIK-9 cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PhevalserCysileSerThrLeuCysileGlyAlaAlaAlaPheSerTyrTyrGluArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ArgGlnLeuGluLeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGluLeuGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ArgyalValleuArgLeuLysProHisLysAlaGlyValGlnTrpArgPheAlaGlySer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rLeuLeuHisArgAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LysArgGlyLeuGlyMetArgHisAlaGluValSerMetAlaAsnMetValLeuIleGly
   sorders
    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0 Other;
proliferation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1262
229
48
86
50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SThrPheThrTy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   euGlyGluArglleAsnThrPheValArg'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ,
u
o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ij
  cellular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BP; 251 A; 387 C; 361 G; 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GluAsnValArgThrLeuAlaLeuIleValCy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-1262)
  and
 cardiovascular, pain,
                                              English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                x AAD36247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2.25e-107
1100.00
67.07%
55.45%
52.26%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MetPheGlnSerL
                                             99pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (1-405)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity:
                                             1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1262
                                           Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-939-483-5
                                             1;
```

83

9

200

563

180

503

100

323

263

120

383

140

160

Sa

. rng

വ

3

-48

939

18-09

```
40;
                                                                                                                                                                          WPI; 2004-069000/07
P-PSDB; ADI27948.
                                                                                                                                                                                                                                             ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (1-405)
                                                                                                                                                                                                                                                                                                                                                                                                                                                       BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1262
11-APR-2000;
26-APR-2000;
19-SEP-2000;
25-SEP-2000;
15-DEC-2000;
18-DEC-2000;
21-DEC-2000;
21-DEC-2000;
21-DEC-2000;
28-FEB-2001;
06-APR-2001;
11-APR-2001;
11-APR-2001;
25-SEP-2001;
25-SEP-2001;
                                                                                                                                                                                                                                             Claim 1; SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
Pred. No.:
                                                                                                                                                           Curtis RAJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-939-483-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
 ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                    1013
                                                                                                                                                                                                                                                                                                      1037
                                                                                                                                                                                                                                                                                                                                       1097
                                                  240
                                                                                   260
                                                                                                                                                    300
                                                                                                                                                                                                                                                                                      372
                                                                                                                                                                                                                                                                                                                      392
  623
                                  683
                                                                                                  803
                                                                                                                                                                                                    902
                                                                                                                                                                                                                                     953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; TWIK-9; gene; 88; ion channel family; ICF; cancer; leukaemia; Alzheimer's disease; Parkinson's disease; multiple sclerosis; epilepsy hepatic disorder; cardiovascular disorder; cytostatic; neuroprotective nootropic; antiparkinsonian; hepatotropic; cardiovascular.
 TGGAGCTTCTTCCACGCCTACTACTACTTCATCACGTTGACTACCATTGGGTTCGGG
                           GGCCTTT
                                                          ||||||||
                                                                                          cecagaacrecrreagegecaagerrececececaeraerrecacrecreerer
                                                                                 gAlaLeu
                                                                                                                                                                                                                                                                                     sProCys
                                                                                                                                                                                                                                                                                                                      sSerLeu
                                                                                                                                                                                                                                                                                                                                      CAGCTTT
                  lAlaPhe
                                                                                                                   ySerLeu
                                                                                                                                  CATCCCT
                                                                                                                                                                                   nSerMet
                                                                                                                                                                                                    GTCTGTG
                                                                                                                                                                                                                                    - rarescescescreeresca
                                                                                                                                                                                                                                                                                                      --ACA
                                                  uValVal
                                                                                                                                                  lGlyVal
                                                                                                                                                                                                                    tileile
             AspTyrValAlaLeuGlnLysAspGlnAlaLeuGlnThrGlnProGlnTyrVa
                                               erPheValTyrIleLeuThrGlyLeuThrValIleGlyAlaPheLeuAsnLe
                                                                                  aGluHisAr
                                                                                                                                                 GlyAspValArgProArgAspProValThrCysAlaAlaAlaAlaGlyGlyVa
                                                          erCysLeuSerGl
                                                                                                                                  - AGCATGGTCATTCA
                                                                                                                                                                                                                                                                                                                              GlyValGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGl

    AGGTACAAGGCGGACGTCCCGGACCTGCA

                                                                                                                                                                                                                    CysSerCysLeuTrpTyrLysSerArgGluLysLeuGlnTyrSerIleProMe
                                                                                                                                                                                                                                                                                     -SerProGlyGlyGlyAlyArgTyrSerAspThrProSerHi
                                                                                                                                                                                                                                                                                                                    LeuCysSerGlyThrGlnArgSerAlaIleSerSerValSerThrGlyLeuHi
                                                                                                                                                                                                                                                     roArgAspLeuSerThrSerAspThrCysValGluHisSerHisSer-
                                                                                 euArgPheMetThrMetAsnAlaGluAspGluLysArgAspAl
                                                                                                                                                                                                                                                                                                                                                       40
                                                                                                                  euThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuS
                                                                                                                                                                                                                                                                                                                                                               AlaAlaPheArgGlyLeuMetLyBArgArgSerSerVal
                                                                                                                                                                                                                             |||||||||||
TGCTCCTGCACCTGCTACCGCTCGCAGGAC-
                                                                                                                                                                  GAGGAGCCGCGCCCAGCCGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                       ВР
                                                                                                                                                                                                                                                                                                    ATCGAGGAGATCTCACCAAGC-
                                                                                                                                                                                                                                                                                                                                                                                                       1262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-00515520.
2000US-0185938P.
2000US-00518866.
2000US-0195734P.
                                                                                                                                  CTCGCCGGAAACCGCAAC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2002US-0014673
                                                                                                                                                                                                                                                                                                                                                                                                                                        entry)
                                                                                                                                                                                                                                                                                                                                                                                                       CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                       (first
                                                                                                                                                                                                                                                                                                                                                                                                       standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US2003165891-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-FEB-2000;
29-FEB-2000;
03-MAR-2000;
07-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  •-
                                                                                                                                                                                                                                                                                                                                                                                                                                                       TWIK-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  04-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                       06-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                       ADI27947;
                                                                                                                                                                                                                                                                                                                                                                      1098
                                                                                                                                                                                                                                                                                                                                                      393
                                                 221
                                                                 684
                                                                                                 744
                                                                                                                                                                                                                                                                                                      1014
                  201
                                  624
                                                                                  241
                                                                                                                   261
                                                                                                                                   804
                                                                                                                                                   281
                                                                                                                                                                                   301
                                                                                                                                                                                                    867
                                                                                                                                                                                                                    321
                                                                                                                                                                                                                                    903
                                                                                                                                                                                                                                                     341
                                                                                                                                                                                                                                                                     954
                                                                                                                                                                                                                                                                                     357
                                                                                                                                                                                                                                                                                                                      373
                                                                                                                                                                                                                                                                                                                                                                                                      ADI27947
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ношо
                                                                                                                                                                                                                                                                                                                                                                                      RESULT
ADI2794
                                                                                                                                                                                                                                                                                                                                                                                                               임
                                                                 g
                                                                                                                                                                  a
                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                     <del>Q</del>
                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                      П
                                                ð
                                                                                                g
                                                                                                                                 ద
                                                                                                                                                                                                   a
                  ઠે
                                                                                 ð
                                                                                                                 ठे
                                                                                                                                                  ઠે
                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                    ठे
                                                                                                                                                                                                                                                     ठ
                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                      ò
```

```
The invention relates to TWIK-6, TWIK-7, IC23927, TWIK-8, IC47611, IC47615, HNMDA-1, TWIK-9, alpha-2delta-4, 54414 and 53763 ion channel family (ICF) nucleic acids and proteins. The TWIK-6, TWIK-7, IC23927, TWIK-8, IC47611, IC47615, HNMDA-1, TWIK-9, alpha-2delta-4, 54414 and 53763 ICF nucleic acids and proteins may be used for preventing, diagnosing and treating ICF-related diseases. The sequences may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of ICF proteins by expressing inactive proteins or to supplement the ICF proteins of ICF proteins. The proteins may also be used as antigens in the production of antibodies against ICF proteins and in assays to identify modulators of ICF protein expression and activity. The antibodies as diagnostic agents for detecting the presence of ICF proteins in samples (e.g. by immunoassay). The nucleic acids and proteins may be used to prevent, diagnose and treat a wide variety of disorders, e.g. cancers and leukaemia, Alzheimer's disease, Parkinson's disease, multiple and leukaemia, appliepsy, hepatic disorders and cardiovascular disorders. This sequence represents cDNA encoding the human TWIK-9 protein of the invention. Note: The sequence data for this patent is also available in electronic format from USPTO at seqdata.uspto.gov/sequence.html.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TWIK-6, TWIK-7, IC23927, TWIK-8, IC47611, IC47615, HNMDA-1, TWIK-9, alpha2delta-4, 54414, or 53763 nucleic acids and proteins, useful for preventing, diagnosing and treating e.g. cancers, Alzheimer's disease cardiovascular disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1262
229
48
86
50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Silos-Santiago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361 G; 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (1-1262)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                638pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .;
O
2000US-0195993P.
2000US-0233537P.
2000US-0235018P.
2000US-0235059P.
2000US-0235059P.
2000US-0256240P.
2000US-025628P.
2001US-005628P.
2001US-00828035.
2001US-00843128.
2001US-00964352.
2001US-00964252.
2001US-00964252.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                x ADI27947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2.25e-107
1100.00
67.07%
55.45%
52.26%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      387
                                                                                                                                                                                                                                                                                                                                                                                                                                       (MILL-) MILLENNIUM PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Glucksmann MA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ä
```

```
1097
                                                                                                                                                                                                                                                                  1013
                                                                                                                                                                                                                                                                                  1037
         203
                                  100
                                                                                                                                                                                       280
                                          323
                                                  120
                                                           383
                                                                   140
                                                                                   160
                                                                                                    180
                                                                                                                     200
                                                                                                                                     220
                                                                                                                                                      240
                                                                                                                                                                      260
                                                                                                                                                                                                       300
                                                                                                                                                                                                                        320
                                                                                                                                                                                                                                                         356
                          263
                                                                           443
                                                                                           503
                                                                                                            563
                                                                                                                             623
                                                                                                                                                                                                                866
                                                                                                                                                                                                                                         340
                                                                                                                                                                                                                                                                          372
                                                                                                                                                                                                                                                                                          392
                                                                                                                                             683
                                                                                                                                                              743
                                                                                                                                                                              803
                                                                                                                                                                                               842
                                                                                                                                                                                                                                902
                                                                                                                                                                                                                                                 953
 9
                 80
                                                                                                                                                                                                                                                                                         uLeuHisArgAla
                                                                                                                                           GCCTTT
                                                                                                                                                                     SerThr
                                                                                                                                                                                                                       GluArg
                                                                                                            GAGGAG
                                                                                                                                                                                                                                                                                  --ACA
                                                                                  AlaPhe
                                                                                                                                                     Serlen
                                                                                                                                                                                            --AGCATGGTCATTCACATCCCT
                                                                                                                                                                                                       GlyVal
                                                                                                                                                                                                                                                                  TACAAG
                                                                                                                                                                                                                                                                          sProCys
                                          GGCAC
                                PheValSerCysIleSerThrLeuCysIleGlyAlaAlaAlaPheSerTyrTyr
||| |||||||||||
|TCTTCTCCTGCATGGGACGCTGTGCATCGGGGCGGCCGCCTTCTCCCAGTGI
                                                                                                                                                                                     LeuThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuSerGly
                                                                                                                                                                                                      GlyAspValArgProArgAspProValThrCysAlaAlaAlaAlaGlyGlyVal
                                                                                                                                                                                                                                                        GAGGAGCCGCGGCCAGCCGGCCC
                                                                                                                                                                                           |||
|--ceccegaaaccecaac
                                 81
                                                                          384
                 61
                         204
                                                                                           444
                                                                                                           504
                                                                                                                                     201
                                                                                                                                                     221
                                                                                                                                                                                                                                                903
                                                                                                                                                                                                                                                                                                  1038
                                         264
                                                  101
                                                          324
                                                                  121
                                                                                   141
                                                                                                    161
                                                                                                                    181
                                                                                                                            564
                                                                                                                                             624
                                                                                                                                                             684
                                                                                                                                                                              744
                                                                                                                                                                                      261
                                                                                                                                                                                               804
                                                                                                                                                                                                                        301
                                                                                                                                                                                                       281
                                                                                                                                                                                                                                867
                        g
                                                                                           В
                                                                                                                            정
                                                                                                                                                                              a
a
                                                                          셤
                ò
                                 à
                                                 ò
                                                         d
                                                                  ð
                                                                                  à
                                                                                                   ð
                                                                                                                    ò
                                                                                                                                    ð
                                                                                                                                                     à
                                                                                                                                                                      ð
                                                                                                                                                                                      Š
                                                                                                                                                                                                       ò
                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                        ठे
                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                          ò
```

```
Polypeptides and polynucleotides of the potassium channel family, useful for identifying agonists/antagonists of therapeutic use and diagnosis and treatment of cancer, pulmonary, cardiovascular, inflammatory and renal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             disorders,
                                                                                                                                                                                                                                                                                                                                                                 Human; DKCN1; potassium channel; cancer; pulmonary disease; depression; cardiovascular disease; inflammatory disease; renal disease; pain; psychiatric disorder; schizophrenia; neurodegenerative disease; Alzheimer's disease; neurological disorder; migraine; epilepsy; sleep-related disorder; erectile dysfunction; alopecia; expressed sequence tag; EST; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present sequence represents an expressed sequence tag (EST) which related to a cDNA encoding a human DKCN1 polypeptide. The polypeptide a member of the potassium channel family. The DKCN1 polypeptides and polynucleotides are useful for treating diseases including cancer, pulmonary, cardiovascular, inflammatory or renal diseases, pain, psychiatric disorders including depression and schizophrenia, neurodegenerative disease including Alzheimer's, neurological disorder migraine, epilepsy, sleep-related disorders, erectile dysfunction and alopecia. DKCN1 polynucleotides are useful as diagnostic reagents for detecting mutations in the associated gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             U; 1 Other;
                                                                                                                                                                                                                                                                                                                   CDNA
                                                                                                                                                                                                                                                                                                                   a human DKCN1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1441
229
48
86
50
5
                                                         113
sArgArgSerSerVal
                           acceaccaccage and a second and a second a second
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Meadows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ë,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             328
                                                                                                                                                                                                                                                                                                                      t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .;
Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
S
                                                                                                                                                                                                                                                                                                                   related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
65. .1189
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 11; Page 25-26; 36pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chapman
                                                                                                                                                             BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ပ်
  AlaalaPheArgGlyLeuMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (SMIK ) SMITHKLINE BEECHAM PLC
                                                                                                                                                               1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.75e-107
1100.00
67.07%
55.45%
                                                                                                                                                                                                                                                                                                                   (EST)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000WO-EP001750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99GB-00005061
2000GB-00003112
                                                                                                                                                                                                                                                                    entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            287 A;
                                                                                                                                                             CDNA;
                                                                                                                                                                                                                                                                                                                      tag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Godden
                                                                                                                                                                                                                                                                   (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000-587424/55
                                                                                                                                                                                                                                                                                                                   Expressed sequence
                                                                                                                                                             standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P-PSDB; AAB18813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200053628-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Duckworth DM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-MAR-1999;
10-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02-MAR-2000;
                                                                                                                                                                                                                                                                   22-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores
                                                       1098
                                                                                                                                                             AAA75887
                                                                                                                                                                                                              AAA75887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo
                                                                                                                                    87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ercent
                                                                                                           RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                core:
                                                                                                                                 AAA758
```

Indels:

(1-1441)

AAA75887

×

(1-405)

US-09-939-483-5

Query Match: Local

Best

Q S

```
548
                                                                   ВЪ
                                                                                                                                                                                                                                                                                                                                                           ΰ
     ATCGAGGAGATCTCACCAAGC-
                                                                   2312
                                                                                                                                                                                                                                                                                                                                                                          5.65e-107
1100.00
67.07%
                                                                                                                                                                                           2000US-0186915P
                                                                                                                                                                                                                                                                                                                                                           A; 627
                                                                                                                                                                                 2001WO-US006801
                                                                                        entry)
                                                                   standard; cDNA;
                                                                                                                           e; psychiatric
disease; heart
titis; ss.
                                                                                                                                                                                                                                                                                                                                                           542
                                                                                                                                                                                                     (TULA-) TULARIK INC
                                                                                        (first
                                                                                                                                                                                                                          WPI; 2001-522949/57
                                                                                                                                                                                                                                                                                                                                                           BP;
                                                                                                                                                                                                                                                    e.g.
                                                                                                                                                                                                               S
                                                                                                                                                            WO200166741-A2
                                                                                                                                                                                                                                                                                                                                                           2312
                                                                                                                                                                                                                Powers
                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                02-MAR-2001;
                                                                                                                                                                                          03-MAR-2000;
                                                                                                                                 bipolar dise
pancreatitis
                                                                                                                                                  Homo sapiens
                                                                                                                                                                      13-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores
                                                                                        29-OCT-2001
                                                                                                                                                                                                                                                                                                                                                            Sequence
      1064
                          1088
                                    393
                                               1148
                373
                                                                   AAH75002
                                                                             AAH75002
                                                                                                                                                                                                                Ď
                                                                                                                                                                                                                                                                                                                                                                           . No. .
                                                                                                                                                                                                                                                                                                                                                                                      Percent
                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                              AAH75
                                                                                                                                                                                                                                                                                                                                                                           Pred
                                                                             d
                                                                                                                                                                                                                                                                                                                                                      1003
                                                                                                                                                                                                                                                                                                                                                                           1063
                                                                                                                                                                                                                                                                                                                                            340
                                                                                                                                                                                                                                                                                                                                                                                      372
                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                       320
                               193
                                                                        313
                                                                                   100
                                                                                             373
                                                                                                       120
                                                                                                                                       493
                                                                                                                                                 160
                                                                                                                                                                      180
                                                                                                                                                                                613
                                                                                                                                                                                           200
                                                                                                                                                                                                     673
                                                                                                                                                                                                                          733
                                                                                                                                                                                                                                                         260
                                                                                                                                                                                                                                                                              280
                                                                                                                                                                                                                                                                                                             916
                                                    253
                     40
                                         9
                                                              80
                                                  GCTGGAG
                                                                                                                                                                                                                                                                                                                             |||||:::
GTCTGTG
                           CAAAGCC
                                                                                                                                                                                                                                         ||||||||
GGTCGTC
                                                                                                                                                                     111
TATGGCGGCCGCTCGGTGGCA
                                                                                                      GGGCGCC
                     1GluLeu
                                                              aGlySer
                                                                                   oSerThr
                                                                                                                                                ySerLeu
                                                                                                                                                                                                                                                                                                                       nSerMet
                                                                                                                                                                                                                                                                                                                                            tileile
                                                                                                                                                                                                                                                                                                                                                                                      BProCys
                                         uLeuGlu
                                                                                            regeace
                                                                                                                                                                                                               lAlaPhe
                                                                                                                                                                                                                         GGCCTTT
                                                                                                                                                                                                                                    uValVal
                                                                                                                                                                                                                                                                                        CATCCCT
                                                                                                                                                                                                                                                                                                  1GlyVal
 lGlyAl
                                                                                                                                                                                                                                                                                                                                           CysSerCysLeuTrpTyrLysSerArgGluLysLeuGlnTyrSerIleProMe
|||||||||
|GCTCCTGCACCTGCTACCGCTCGCAGGAC-----TATGGCGGCCGCTC
                                                             AspTyrValAlaLeuGlnLysAspGlnAlaLeuGlnThrGlnProGlnTyrVa.
                                                                                                                                                                                                                                   SerPheValTyrIleLeuThrGlyLeuThrValIleGlyAlaPheLeuAsnLe
|||||||:::|||||||||
AGCTTTATGTATATCCTGGTGGGGCTGACGGTCATCGGGGCCTTCCTCAACCT
-AGGTACAAGGCGGACGTCCCGGACCTGCA
                                                                                                                                                                                                                                                                                                                      GlyValGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGl
                                                                                                                                                                                                                                                                            sAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuS
                                                                                                                                                                                                                                                                                                                                                                                      erProGlyGlyGlyArgTyrSerAspThrProS
                                                                                                                                                                                                                                                                                   AGCATGGTC
                                                                                                                                                                                                                                                                                                 GlyAspValArgProArgAspProValThrCysAla
                                                                                                                                                                                                                                                                                                           SAGGAGCCGCGCCAGCCGGCCC
                                                                                                                                                                                                                         674
                                                                                                                                                                                                                                                                                                                                            321
                               134
                                                   94
                                                             61
                                                                        54
                                                                                                       101
                                                                                                                            121
                                                                                                                                      434
                                                                                                                                                 141
                                                                                                                                                            494
                                                                                                                                                                                554
                                                                                                                                                                                           181
                                                                                                                                                                                                     614
                                                                                                                                                                                                                                                                              261
                                                                                                                                                                                                                                                                                        854
                                                                                                                                                                                                                                                                                                  281
                                                                                                                                                                                                                                                                                                                                                                                      357
                                                                                   81
                                                                                                                                                                      161
                                                                                                                                                                                                                201
                             QQ
                                                   g
                                                                                                                 g
                                                                                                                                     g
                                                                                                                                                                               a
a
                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                        a
         셤
                                                                       a
                                                                                            d
                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                         d
                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                      요
                    ò
                                         ठे
                                                            ठ
                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                  ठे
                                                                                                       ઠે
                                                                                                                            ઠે
                                                                                                                                                 ठ
                                                                                                                                                                      8
                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                       ઠ
```

```
The present sequence encodes a human potassium channel protein, termed KCNB. KCNB is expressed in breast tissue. The KCNB polypeptides are useful for identifying a compound that modulates its activity. The KCNB polypeptide and nucleic acid are useful for detecting cancer cells in biological samples. The inhibitor of the potassium channel polypeptide is cuseful for inhibiting proliferation of a cancer cell and for treating a potassium channel-associated disorder. The KCNB nucleic acids, proteins, of diseases are useful in the diagnosis or prognosis, or treatment of diseases are cancer, brain associated disorders (such as epilepsy, Alzheimer's disease, Parkinson's disease, stroke, multiple sclerosis, migraine), psychiatric disorders (such a depression, schizophrenia, bipolar diseases) and diseases related to the heart (such as pancrearite...)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; potassium channel protein; KCNB; breast tissue; cancer; stroke; potassium channel-associated disorder; brain associated disorder; epilepsy; Alzheimer's disease; Parkinson's disease; multiple sclerosis; migraine; psychiatric disorder; depression; schizophrenia; diabetes; bipolar disease; heart disease; arrhythmia; pancreas disease;
                                  ||| ::: ||| |||||||||| TTAAAAACAGCCTCTTCCCATCGCCTATTAGCTCCATCTCTCTGGGTTACACAGCTTT
SerLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A nucleic acid encoding a potassium channel, termed KCNB (potassium channel expressed in breast), useful in the diagnosis, prognosis or treatment of diseases associated with altered KCNB activity or expression, e.g. cancer and diabetes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDNA sequence of human potassium channel protein KCNB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2312
229
48
LeuCysSerGlyThrGlnArgSerAlaIleSerSerValS
                                                                                                                                                                                                                        ACCGACCACCAGAGGCTGATGAAACGCCGGAAGTCCGTT
                                                                                                                                                    AlaAlaPheArgGlyLeuMetLysArgArgSerSerVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             G; 595
```

Best Local S Query Match: DR:	tal Similarity: 55.45% Mismatches: 86  Indels: 52.26% Indels: 50	<i>&amp;</i>	m
US-09-93	3-5 (1-405) x AAH75002 (1-2312)	qa	σ
	1 GluAsnValArqThrLeuAlaLeuIleValCvsThrPheThrTvrLenLenValGlvAl	0y	m
qq	cagaacgreegacrererecercaregreerectreaceraceracergeregeege	ପ୍ର	10
ò	MetllegjuArgGlnArgieuGluLeu 4	ζ	М
qa		අුර	10
ò	41 ArgGlnLeuGluLeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGluLeuGlu 60	ð 1	
q	170 GAGGAGATCCGGATCAAGGGGAAGTACAACATCAGCAGGGGGGACTACCGGCAGCTGGAG 229	an i	
ò	61 ArgValValLeuArgLeuLysProHisLysAlaGlyValGlnTrpArgPheAlaGlySer 80	ADRE	14
qq	GGCGTCCAGTGGAAATTCGCCGG	XX	ADR659
λo :	81 PheTyrPheAlalleThrVallleThrThrIleGlyTyrGlyHisAlaAlaProSerThr 10	XE	ACC
a d	TTCTACTTTGCGATCACGGTCATCACCACCATAGGTTATGGGCACGCTGCACCTGGCACC	XX DE	Human
දුරු දුර	101 ASPG1YG1YLYSVA1PheCYSMetPheTyrAlaLeuLeuG1yIleProLeuThrLeuIle 120 	KW KW K	human; differ
ò	PheValArgTyrLeuLeuHisArgAla 14	XX SO	O E
qq		XX M	WO2004
ò	SerMetAlaAsnMetValLeuIl	X & S	10-SEP
рр	470 AAGAAGTGCTGTGGCATGCGCAACACTGACGTGTCTATGGAGAACATGGTGACTGTGGGC 529	X	22-FEB
ò	161 PheValSerCysIleSerThrLeuCysIleGlyAlaAlaAlaAlaPheSerTyrTyrGluArg 180		27-FEB 14-MAY
qa	၅၃၃၅၅၃၅	XX	(HINZ/
λ̈́	181 TrpThrPhePheGlnAlaTyrTyrTyrCysPheIleThrLeuThrThrIleGlyPheGly 200	PA PA	(DAHL/ (ROSE/
q <sub>Q</sub>	arcacerrgacr	PA PA	(HERM/
ζ,	AspTyrValAlaLeuGlnLysAspGlnAlaLeuGlnThrGlnProGlnTyrValAlaPhe	XXI	Hinzma
ထူ	GACTACGTGGCCCTGCAGACCAAGGGCGCCCTGCAGAAGAAGCCGCTCTACGTGGC	PI PI	Schmit Xinzho
ò 8	SerPheValTyrIleLeuThrGlyLeuThrValIleGlyAlaPheLeuAsnLeuValVal 2	XX &	WPI; 2
an (	AGCTTTATGTATATCCTGGTGGGGCTGACGGTCATCGGGGCCTTCCTCAACCTGGTCGTC 7	XX T4	
දු දු	241 LeuArgPheMetThrMetAsnAlaGluAspGluLysArgAspAlaGluHisArgAlaLeu 260                  770 CTCAGGTTCTTGACCATGAACAGTGAGGGGGGGGGGGGG	TG XX	useful agents
ò	LeuThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuSerGlySerLeu 2	S S	Claim
qq	ctcgccggaaaccgcaacagcatggtcattcacatccct	88	This i sequen
٥٧	281 GlyAspValArgProArgAspProValThrCysAlaAlaAlaAlaGlyGlyValGlyVal 300	ខ្ល	or the determ
QQ	869 GAGGAGCCGGGCCCAGCCGGCCC	388	prosta
λo	301 GlyValGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGlnSerMet 320	388	predet
DР	93	88	short- weight
දු ද	321 CysSerCysLeuTrpTyrLysSerArgGluLysLeuGlnTyrSerIleProMetIleIle 340             929 TGCTCCTGCTGCTACGCTACGACGACTATGGCGCCCGCTGGGGAA	888	aptame polype
}_		-	

```
his invention describes novel cytostatic polynucleotide and polypeptide equences which can be used in a method for diagnosing prostatic cancer. It is based on the risk of developing prostatic cancer. Diagnosis is based on etermining over transcription or over expression of the sequences in rostatic tissue. Screening for inhibitors of the sequences or detection ubstances involves a binding assay, any compounds that bind are elected, optionally after deconvolution of mixtures. Detection of a redetermined minimum level of the reporter indicates the presence of umour cells. Inhibitors can be chosen from antisense oligonucleotides, hort-interfering RNA or ribozymes; an organic molecule of molecular eight below 5000, preferably 300, that binds to the polypeptide; an organic the polypeptide; a (monoclonal) antibody (Ab) against the olypeptide, preferably humanised or human; an anti-idiotype, non-human monoclonal) antibody directed against Ab or any of the above derivatised
                                                                                                                                                                                                                                          1123
                                                                                                                                                                                           392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ŧ,
                                                                                                                                                                                                                 ||| ::: ||| |||||||||| || TTAAAAAACAGCCTCTTCCCATCGCTTAGCTTAGCTTTTAGCTTCTCTGGGTTACACAGCTTT
                               --ACA
                                                                                                                                                                                         LeuCysSerGlyThrGlnArgSerAlaIleSerSerValSerThrGlyLeuHisSerLeu
                                                                                            -SerProGlyGlyGlyArgTyrSerAspThrProSerHisProCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 acids, and encoded proteins, from prostatic cancer tissue diagnosis, treatment and in screening for specific binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        , C, Specht
Roepcke S;
ProArgAspLeuSerThrSerAspThrCysValGluHisSerHisSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rosenthal A, Hermann K, Pilarsky
;, Bruemmendorf T, Kinnemann H, F
                                                                                                                                                                                                                                                                                       405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #1
                                                                                                                                                                                                                                                                                 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; cytostatic; diagnosis; prostatic cancer; rential expression analysis; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      derived DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Page 401; 1607pp; German.
                                                                                                                                         ATCGAGGAGATCTCACCAAGC--
                                                                                                                                                                                                                                                                                                                                                                                                                            standard; DNA; 3234 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B-2003; 2003DE-01009985.
Y-2003; 2003DE-01022134.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2004WO-DE000433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   prostatic carcinoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Beckmann G
Staub E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DAHL E.
ROSENTHAL A.
HERMANN K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dahl E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2004-653386/63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HINZMANN B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PILARSKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4076614-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B-2004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ncleic
nl for d
ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    lann B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               itt A,
nong L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C-2004
                                                                                                                                                                                     373
                                              980
                                                                                                                                          040
                                                                                                                                                                                                                                                                                                                                                                                                                            962
                                                                                            357
                                                                                                                                                                                                                                      064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tt
```

. rng

```
radioisotope. The polynucleotides are identified in human prostatic radioisotope. The polynucleotides are identified in human prostatic cancer by differential expression analysis, using DNA microarrays, between normal and tumorous tissues, with (over) expression being detected by quantitative PCR. Analysis of prostatic cancer samples showed that CD24 was upregulated in many of them. Sections of tissue, isolated from prostatic cancer patients, or subjects at risk, were incubated sequentially with anti-human CD4 murine monoclonal antibodies; biotinylated second antibody; streptavidin-conjugated horseradish peroxidase and then diaminobenzidine as colour former (brown). The samples were counterstained with hemalum (blue). Malignant cells stained strongly but non-malignant cells only weakly. In 15 of 63 samples of adenocarcinoma, membrane and cytoplasmic staining was very strong, and lymph node metastases were also stained. ADR65805-ADR66954 represent the polynucleotide and polypeptide sequences used in the method of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            invention
```

Other; 0 U; 0 Ŧ, 717 . Ö 687 A; 954 C; 876 Sequence 3234 BP;

	Alignment Scores: Pred. No.: Pred. No.: Score: Score: Fercent Similarity: Fercent Similarity: Forest Local Similarity: Forest Match: Forest Match: Forest Match: Forest Match: Forest Local Similarity: Forest Match: Forest Matchine Forest Match	3-09-939-483-5 (1-405) x ADR65962 (1-3234)	<b>н</b>	16 CAGAACG	21 AlaValPheAspAlaLeuGluSerGluProGluMetIleGluArgGlnArgLeuGluLeu 40	16	41 ArgGlnLeuGluLeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGluLeuGlu 60	136	. 61	196 CTGGTGATCCTGCAGTCGGAACCGCACCGCGCGCGTCCAGTGGAAATTCGCCGGCTCC 255	81 PheTyrPheAlaIleThrValIleThrThrIleGlyTyrGlyHisAlaAlaProSerThr 100	256 TTCTACT	101 AspGlyGlyLysValPheCysMetPheTyrAlaLeuLeuGlyIleProLeuThrLeuIle 120	316 dArgcgd	/ 121 MetPheGlnSerLeuGlyGluArglleAsnThrPheValArgTyrLeuLeuHisArgAla 140	376 ATGTTCC	/ 141 LysArgGlyLeuGlyMetArgHisAlaGluValSerMetAlaAsnMetValLeuIleGly 160	436	/ 161 PheValSerCysIleSerThrLeuCysIleGlyAlaAlaAlaPheSerTyrTyrGluArg 180	496 TTCTTCT	. 181	556 TGGAGCT	201	616 GACTACG
<b>J</b>	Ali Pre Sco Per Oue	ns-	ò	ΩQ	ò	qq	ઠે	QQ	ò	qq	δ	ф	δ	QQ	ò	qq	ઠે	QQ	ઠે	ΩΩ	ò	Dp	ઠે	g

```
1005
                                                                                                                                                                                                                                                                         1089
                                              795
                                                              280
                                                                                             300
                                                                                                                                                           340
                                                                                                                                                                                           356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ë
                                                                                                                                                                                                                                                       CTCGCCGGAAACCGCAAC---------AGCATGGTCATTCACATCCCT
                                                                                                                                                                                                    SerProGlyGlyGlyArgTyrSerAspThrProSerHisProCys
                                                             LeuThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuSerGlySerLeu
                                                                                            GlyAspValArqProArgAspProValThrCysAlaAlaAlaAlaGlyGlyValGlyVal
                                                                                                                                      ---AGGTACAAGGCGGACGTCCCGGACCTGCAGTCTGTG
                                                                                                                            GlyValGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGlnSerMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rosenthal A, Hermann K, Pilarsky C, Specht ; Bruemmendorf T, Kinnemann H, Roepcke S;
                                                                                                                                                                                         ProArgAspLeuSerThrSerAspThrCysValGluHisSerHisSer----
                                                                                                                                                                                                                                                                                       405
                                                                                                                                                                                                                                                                                      Ø
                                                                                                                                                                                                                                                                                                                                                                                      15
                                                                                                                                                                                                                                                                                                                                                                                                      human; cytostatic; diagnosis; prostatic cancer differential expression analysis; ds.
                                                                                                                                                                                                                                                                                                                                                                                      Human prostatic carcinoma derived DNA SEQ ID
                                                                                                            GAGGAGCCGCGGCCCAGCCGGCCC-
                                                                                                                                                                                                                                   ||||||
1006 ATCGAGGAGATCTCACCAAGC--
                                                                                                                                                                                                                                                                                                                                       ВР
                                                                                                                                                                                                                                                                                                                                      ADR66646 standard; DNA; 3234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2003DE-01009985
2003DE-01022134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2004WO-DE000433
                                                                                                                                                                                                                                                                                                                                                                       entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ġ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HINZMANN B.
DAHL E.
ROSENTHAL A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hinzmann B, Dahl E,
Schmitt A, Beckmann
Xinzhong L, Staub E;
                                                                                                                                                                                                                                                                                                                                                                       (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HERMANN K.
PILARSKY C
                                                                                                                                                                                                                                                                                                                                                                                                                                             WO2004076614-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-FEB-2004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27-FEB-2003;
14-MAY-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                       02-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                             10-SEP-2004
                                                                                                                                                                                                                                                                                                                                                       ADR66646;
               9/9
                                              736
                                                                              964
                                                                                                                                                           321
                                                                                                                                                                           895
                                                                                                                                                                                           341
                                                               261
                                                                                             281
                                                                                                             835
                                                                                                                             301
                                                                                                                                            859
                                                                                                                                                                                                           946
                                                                                                                                                                                                                          357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HINZ/)
(DAHL/)
(ROSE/)
(HERM/)
                                                                                                                                                                                                                                                                                                                       RESULT 15
ADR66646
                                                                                                                                                                                                                                                                                                                                        엄
                                                                                                            <del>Q</del>
                                                                                                                                           셤
                                                                                                                                                          8
                                                                                                                                                                           뎡
                                                                                                                                                                                          ð
                                                                                                                                                                                                          셤
                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                       ద
                                ठे
                                             d
                                                              ò
                                                                             d
                                                                                            ò
                                                                                                                             ઠે
                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                        ઠે
```

```
tissue,
inding
         cancer
           specific
        prostatic
           for
          screening
        from
        encoded proteins, treatment and in s
          in
        and
           diagnosis,
   WPI; 2004-653386/63
        acids
        nucleic
          for
           useful
```

German Page 1058-1059; 1607pp; 1; Claim

against the non-human derivatised and/or immunostimulace are identified in human pressions, analysis, using DNA microarrays, analysis, using bNA microarrays, analysis, using boxed that ancer samples showed that This invention describes novel cytostatic polynucleotide and polypeptide sequences which can be used in a method for diagnosing prostatic cancer or the risk of developing prostatic cancer. Diagnosis is based on determining over transcription or over expression of the sequences in prostatic tissue. Screening for inhibitors of the sequences or detection substances involves a binding assay, any compounds that bind are selected, optionally after deconvolution of mixtures. Detection of a predetermined minimum level of the reporter indicates the presence of tumour cells. Inhibitors can be chosen from antisense oligonucleotides, short-interfering RNA or ribozymes; an organic molecule of molecular weight below 5000, preferably 300, that binds to the polypeptide; a (monoclonal) antibody directed against Ab or any of the above derivatise (monoclonal) antibody directed against Ab or any of the above derivatise with a reporter group, cell toxin, immunostimulatory molecules and/or radioisotope. The polynucleotides are identified in human prostatic cancer by differential expression analysis, using DNA microarrays, between normal and tumorous tissues, with (over) expression being detected by quantitative PCR. Analysis of prostatic cancer samples showed that CD24 was upregulated in many of them. Sections of tissue, isolated from prostatic cancer patients, or subjects at risk, were incubated sequentially with anti-human CD4 murine monoclonal antibodies; biotinylated second antibody; streptavidin-conjugated horseradish peroxidase and then diaminobenzidine as colour former (brown). The samples were counterstained with hemalum (blue). Malignant cells stained strongly but non-malignant cells only weakly. In 15 of 63 samples of adenocarcinoma, membrane and cytoplasmic staining was very strong, and lymph node metastases were also stained. ADR65805-ADR66954 represent the polynucleotide and polypeptide sequences used in the method of the olypeptide ic cancer | on of a sence of sleotides, ecular the sequences in quences or detecti

U; 0 Other; 0 ij. 876 G; 717 ΰ 687 A; 954 Sequence 3234 BP;

100 40 9 80 6 CAAAGCC TGGCACC ArgValValLeuArgLeuLysProHisLysAlaGlyValGlnTrpArgPheAlaGlySer SerThr 366666 uGluLeu GlyAl AspGlyGlyLysValPheCysMetPheTyrAlaLeuLeuGlyIleProLeuTh AlaValPheAspAlaLeuGluSerGluProGluMetIleGluArgGlnArgLe PheTyrPheAlaIleThrValIleThrThrIleGlyTyrGlyHisAlaAlaPr ThrPheThrTyrLeuLeuV 3234 229 48 86 50 5 Length:
Matches:
Conservative:
Mismatches: Cys Indels eVal Gaps (1-3234)euAlaLeuIl x ADR66646 9.42e-107 1100.00 67.07% 55.45% 52.26% GluAsnValArgThrL (1-405)Percent Similarity: Best Local Similarity: Alignment Scores: US-09-939-483-5 16 9/ 61 101 41 136 196 81 256 Query Match: DB: Š. Score: Pred 셤 g g 셤 a a ò ò ð ð ð ð

```
S
                   140
                               Ŋ
                                            160
                                                        495
                                                                     180
                                                                                              200
                                                                                                                       220
                                                                                                                                                240
                                                                                                                                                                         260
                                                                                                                                                                                                   280
                                                                                                                                                                                                                                                     320
                                                                                                                                                                                                                                                                                         S
                                                                                 ហ
                                                                                                         ស
                                                                                                                                   Ŋ
                                                                                                                                                            S
                                                                                                                                                                                      79
euLeuHisArgAla
                   --AGGTACAAGGCGGACGTCCCGGACCTGCAGTCTGTG
                                                                                                                                                                                                                                                                            CysserCysLeuTrpTyrLysSerArgGluLysLeuGlnTyrSerIleProMetIleIle
                                                                                                                                                                                                                                                                                         ----rhreececcecrcestera
                                                                                                                                                                                                                                                                                                     PhevalSerCysIleSerThrLeuCysIleGlyAlaAlaAlaPheSerTyrTyrGluArg
                                                                                             euThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuSerGlySerLeu
                                                                                                                                                                                                          |||| :::
--AGCATGGTCATTCACATCCCT
                                                                                                                                                                                                                           GlyAspValArqProArgAspProValThrCysAlaAlaAlaAlaGlyGlyValGlyVal
                                                                                                                                                                                                                                                                                                                               SerProGlyGlyGlyArgTyrSerAspThrProSerHisProCys
                                                                                                                                                                                                                                                     GlyValGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGlnSerMet
                                                                                                                                                                                                                                                                                                                                                                                  405
                                                                                                                                                                                                                                                                                                                                                                                  erVal
                                                                                                                                                                                                                                                                                                                                                                                             acceaccaccagagecrearcaaacceccaaagrecerr
                                                                                                                                                                                                                                                                                    AlaAlaPheArgGlyLeuMetLysArgArgSerS
                                                                                                                                                                                                                                      GAGGAGCCGCGAGCCGGCCC
                                                                                                                                                                                                                                                                                                                                           ATCGAGGAGATCTCACCAAGC--
                                                                                                                                                                                                               crceceanacceanc-
                                                                                                                                                                                                                                                                                                                                                                      1030
                                                                                                                                                                                                                                                                                                                                                                                               1090
       316
                                                         436
                                                                      161
                                                                                  496
                                                                                                           556
                                                                                                                        201
                                                                                                                                    919
                                                                                                                                                                                                                                                                              321
                                                                                               181
                                                                                                                                                             919
                                                                                                                                                                          241
                                                                                                                                                                                      736
                                                                                                                                                                                                   261
                                                                                                                                                                                                               796
                                                                                                                                                                                                                            281
                                                                                                                                                                                                                                         835
                                                                                                                                                                                                                                                                 59
                                                                                                                                                                                                                                                                                                                   946
                                                                                                                                               ò
                                                                                                                                                            g
                                                                                                                                                                                     d
                                                                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                                                                         a
B
                                                                                  셤
                                                                                                           원
                                                                                                                                                                                                               d
                   8
                                                        셤
                                                                     ठ
                                                                                               ठे
                                                                                                                        ò
                                                                                                                                   셤
                                                                                                                                                                         ò
                                                                                                                                                                                                   ò
                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                               \delta
```

08:12:2 2005, Search completed: September 16, Job time: 717 secs 1938, Ap 1042, Ap 11, Appli 45, Appli 11, Appli 11, Appli 12, Appli 15338, Ap 15338, Ap 15338, Appli 15338, Appli 15338, Appli 15338, Appli 17, Appli 12, Appli 12, Appli 12, Appli 12, Appli 12, Appli 10, Appli

Sequence

Н

0

Appli Appli

.rni

S

score

Perfect

Title

Sequence:

Scoring

protein

δ

0

Run

number

Total

Searched

DB DB

Minimum Maximum

```
RESULT 1
US-09-144-914-3
; Sequence 3, Application US/09144914
; Patent No. 6309855
; GENERAL INFORMATION:
APPLICANT: Duprat, Fabrice
APPLICANT: Lesage, Florian
APPLICANT: AND THEIR USE, ESPECIALLY FOR THE
CURRENT FILING DATE: 1998-09-01
EARLIER APPLICATION NUMBER: 60/095,234
EARLIER FILING DATE: 1998-08-04
EARLIER FILING DATE: 1998-08-04
EARLIER FILING DATE: 1998-08-04
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 3
LENGTH: 2514
TYPE: DNA
US-09-432-470-1
US-09-432-470-3
US-09-949-016-1938
US-09-949-016-1042
US-09-949-016-1042
US-09-236-080-1
US-09-336-643A-82
US-09-314-915A-45
US-09-314-915A-45
US-09-31-367B-3
US-09-561-763-3
US-09-561-763-3
US-09-362-842-68
US-09-362-842-68
US-09-362-842-68
US-09-561-763-1
US-09-362-842-1
US-09-561-763-1
US-09-561-763-1
US-09-561-763-6
US-09-561-763-4
US-09-561-763-7
US-09-561-763-9
US-09-561-763-9
US-09-431-367B-7
US-09-561-763-9
US-09-431-367B-9
US-09-431-367B-9
US-09-431-367B-9
US-09-431-367B-12
US-09-561-763-10
US-09-561-763-10
US-09-561-763-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ..23e-22
.819.00
  TASK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDS
(126)..(1307)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION:
  Scores:
 FEATURE:
NAME/KEY:
LOCATION:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Pred. No.: Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No.:
 RESULT
                                                                                                                        υυυ
                                                                                                                                                                                                                                                                                                 .583
                                                                                                                                                                                                                                                                                                                                                           -FGAPOP=6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3, Appli
1555, Ap
13297, A
1760, Ap
13502, A
11, Appl
60471, A
1497, Ap
432, App
1130, Ap
1130, Ap
                                                                                                                                                                                                                                                                     Command line parameters:
-MODEL=frame+ p2n.model -DEV=x1h
-Q=/cgn2 1/USPTO spool/US09939483/runat 15092005 111357 9602/app query.fasta-De/cgn2 1/USPTO spool/US09939483/runat 15092005 111357 9602/app query.fasta-DB=1ssued Patents NA -QFMT=fastap -SUFFIX=rni -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=Bits -START=1 -END=-1 -THR MAX=100 -THR MIN=0 -ALIGN=15
-LIST=45 -DOCALIGN=200 -THR SCORE=pct -THR MAX=100 -THR MIN=0 -ALIGN=15
-MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER=US09939483 @CGN 1 1 177 @runat 15092005 111357 9602 -NCPU=6 -ICPU=3
-NO MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-NO MMAP -LARGEQUERY -NEG SCORES=0 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP:
-DEV TIMBOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP:
                                                                             dates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                       cted by chance to have a of the result being printed score distribution.
                                                                                                               40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ion
                                                             Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                              ďn
                                                                                                               .. STGLHSLAAFRGLMKRRSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Descript
                                                            0 ; Search time 231 Se
(without alignments)
2868.797 Million cell
                                                                                                                                                                                                   2405568
                                                                                                                                                                                                                                                                                                                                                                                   led_Patents_NA:*
/cgn2_6/ptodata/1/ina/5A_COMB.seq:*
/cgn2_6/ptodata/1/ina/5B_COMB.seq:*
/cgn2_6/ptodata/1/ina/6A_COMB.seq:*
/cgn2_6/ptodata/1/ina/6B_COMB.seq:*
/cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
/cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
                   Ltd
                                          p2n model
        5.1.6
Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-144-914-3

US-09-949-016-1555

US-09-949-016-13297

US-09-949-016-1760

US-09-349-016-13502

US-09-349-016-13502

US-09-949-016-1497

US-09-799-451-432

US-09-799-451-432

US-09-362-842-13

US-09-36-080-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                      No. is the number of results predicted by greater than or equal to the score of the derived by analysis of the total score di
                                                                                                                                                                                                   hits satisfying chosen parameters:
                                                                                                                                                                                  residues
                                            frame_plus_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
          version
- 2005
                                                             :46:00
                                                                                                                                                                                                                                            0%
100%
45 summaries
                                                                                                                                       0.5
7.0
7.0
                                                                                                                                                                                  818138359
                                                                                                              ENVRTLALIVCTFTYLLVGA.
                                                             02
                                                                                                                                       Xgapext
Ygapext
Fgapext
Delext
          GenCore
(c) 1993
                                                            2005,
                                           using
                                                                                                                                                                                                                    2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                                                                                            Minimum Match (Maximum Match )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-939-483-
2105
1 ENVRTLALIVCT
                                                                                                                                                                                  seds,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2514
2588
43507
1167
88758
1227
601
2730
2730
1086
1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                             16
                                                                                                                             BLOSUM62
Xgapop 10.0
Ygapop 10.0
Fgapop 6.0
Delop 6.0
                                            search,
                   Copyright
                                                            September
                                                                                                                                                                                  1202784
                                                                                                                                                                                                                  length:
length:
                                                                                                                                                                                                                                                                                                                                                                                   188ued
1: /cg
2: /cg
3: /cg
4: /cg
5: /cg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   866.24
44.365.33
36.33
116.88
16.88
16.88
16.88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query
Match
                                           nucleic
                                                                                                                                                                                                                                              Post-processing:
                                                                                                                                                                                                  of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1819
1819
1378
1100
774
773
354.5
354.5
354.5
                                                                                                                                                                                                                    seq
seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
                                                                                                                               table:
```

CHANNELS, THEIR CLONING THE SCREENING OF DRUGS

score gand is

Result

oz

40040010 100010

U

Pred.

514 57

Length: Matches:

1053 TGCTCGTGCCTGTGGTAC  341 ProArgAspLeuSerThr	Qy       401 ArgArgSerSerVal 405	aig et al. MORPHISMS I H HUMAN DIS ER: US/09/9 00-04-14 : 60/241,75	; PRIOR APPLICATION NUMBER: 60/237,768 ; PRIOR FILING DATE: 2000-10-03 ; PRIOR APPLICATION NUMBER: 60/231,498 ; PRIOR FILING DATE: 2000-09-08 ; NUMBER OF SEQ ID NOS: 207012 ; SOFTWARE: FastSEQ for Windows Version 4.0 ; LENGTH: 2588 ; TYPE: DNA ; ORGANISM: Human US-09-949-016-1555	Alignment Scores: Pred. No.: Pred. No.: Score: Score: Percent Similarity: Best Local Similarity: R6.41% Mismatches: DB:  A Gaps: Conservative: Best Local Similarity: B6.41% Tindels: Conservative: B6.41% Gaps: Conservative: B6.41% Gaps: B6.41% Gaps:	GludanvalargThrLeualaLeuIleValCysThrPheThrTyrLeuLeuValGlyAla 20   1 GludanvalargThrLeualaLeuIleValCysThrPheThrTyrLeuLeuValGlyAla 20   1::
Percent Similarity:       90.37%       Conservative:       9         Best Local Similarity:       88.15%       Mismatches:       25         Query Match:       3       Gaps:       2         Obs:       3       (1-405) x US-09-144-914-3 (1-2514)       3         Oy       1 GluAsnValArgThrLeuAlaLeuIleValCysThrPheThrTyrLeuLeuValGlyAla       20         Oy       1::	41 ArgGlnLeuGluLeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGluLeuGlu 60	81 PheTyrPheAlalleThrVallleThrThrIleGlyTyrGlyHisAlaAlaProSerThr 1	141 LysargGlyLeuGlyMetargHisalaGluValSerMetalaAsnMetValLeuIleGly 160  141 LysargGlyLeuGlyMetargHisalaGluValSerMetalaAsnMetValLeuIleGly 160	181 TrpThrPhePheGlnAlaTyrTyrCysPheIleThrLeuThrThrIleGlyPheGly 200	221 SerPheValTyrIIeLeuThrGlyLeuThrValIIeGlyAlaPheLeuAsnLeuValVal 240  [

u Q S

d

8

ठ

a

ద

õ

집

8

셤

õ

Б

δ

ద

ઠે

3

```
GlnThrGlnProGlnTyrValAlaPheSerPheValTyrIleLeuThrGlyLeuThrVal
                                                                                                                                                                                                                                                                                                                                                                                           AlaalaalaalaGlyGlyValGlyValGlyValGlyGlySerGlyPheArgAsnValTyr
|||||||||||
ACGGCGCCAGCG---------GGCGGCGCGCGCAACGTCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -GGTGGCAGGCGCACACTACGGACACCGCCTCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlyLeuSerCysLeuSerGlySerLeuGlyAspValArgProArgAspProValThrCys
                                                                                                                        43507
270
6
24
14
                                                                                                                                                                          (1-43507)
                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                         x US-09-949-016-13297
                                                                 ٥.
  9
CURRENT APPLICATION NUMBER: US/09/949,01

CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR FILING DATE: 2000-10-20

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: FastSEQ for Windows Version 4.

SEQ ID NO 13297

LENGTH: 43507

TYPE: DNA

ORGANISM: Human
  2
                                                                 4
                                                                                                                       3.38e-162
1378.00
87.90%
85.99%
65.46%
                                                                                                                                                                          (1-405)
                                                                                                                 Alignment Scores:
Pred. No.:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                             ORGANISM: Human
-09-949-016-13297
                                                                                                                                                                          -483-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           39941
                                                                                                                                                                                                                                                                                                                      39563
                                                                                                                                                                                       92
                                                                                                                                                                                                      39323
                                                                                                                                                                                                                    112
                                                                                                                                                                                                                                  9383
                                                                                                                                                                                                                                                132
                                                                                                                                                                                                                                                              9443
                                                                                                                                                                                                                                                                                                        172
                                                                                                                                                                                                                                                                                                                                                                                                                                       39803
                                                                                                                                                                                                                                                                                                                                                                                                                                                     272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             312
                                                                                                                                                                                                                                                                             152
                                                                                                                                                                                                                                                                                                                                     192
                                                                                                                                                                                                                                                                                                                                                                 212
                                                                                                                                                                                                                                                                                                                                                                                             232
                                                                                                                                                                                                                                                                                                                                                                                                                         252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9863
                                                                                                                                                                                                                                                                                                                                                  39623
                                                                                                                                                                                                                                                                                                                                                                               39683
                                                                                                                                                                                                                                                                                                                                                                                                          39743
                                                                                                                                                                                                                                                                                          39503
                                                                                                                                                                          US-09-939
                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                      원
                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           원
                                                                                                                                                                                       ò
                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                            ठ
                                                                                                                                                                                                                                                                                                        ठे
                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                        1048
                                                                                                                                                                                                                                                                                                                                    1108
                                                                                                                                                                                                                                                                                                                                                                 1168
                                                                                                                                                                                                                                                                                                                                                                                                                         1288
                                                                                                                                                                                                                                                                                                                                                                               380
                                                                                                                                                                                                                                                                                                                                                                                            122
                                                                                                                                                                                                                                                                                                                                                                                                          400
                             140
                                                                                                                                             220
                                                                                                                                                           790
                                                                                                                                                                                                                                                                                                                      340
                                                                                                                                                                                                                                                                                                                                                   360
                                           550
                                                          160
                                                                        610
                                                                                      180
                                                                                                    670
                                                                                                                  200
                                                                                                                                730
                                                                                                                                                                          240
                                                                                                                                                                                       850
                                                                                                                                                                                                      260
                                                                                                                                                                                                                    910
                                                                                                                                                                                                                                  280
                                                                                                                                                                                                                                                949
                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                           320
  120
                490
                                                                                                                                                                                                                                                                             994
                              BArgAla
||||||||
|CCGCGCC
                                                                                                                                                                                 ||||||||
                                                                                                                                                                                                     gAlaLeu
|||||||
cccccrc
                                                                                                                                                                                                                                                                                                   GTCCATG
                                                                                                                                                                                                                                                                                                                                                           GGGAGGG
                                                                                                                          CTTCGGC
 AspGlyGlyLysValPheCysMetPheTyrAlaLeuLeuGlyIleProLeuThrLeuIle
                                                                                    PhevalSerCysIleSerThrLeuCysIleGlyAlaAlaAlaPheSerTyrTyrGluArg
                                                                                                                                                      GGCCTTC
                                                                                                                                                                                                                                                                                                                                                  0G1yG1y
                                                                                                               yPheGly
                                                                                                                                                                                                                                                                                                                     uMetLys
                                                                                                                                             lAlaPhe
                                                                                                                                                                        CATGAAG
                                                        ySerLeu
                                                                                                                                                                                                                                                --GGT
                                                                                                                                                                                                                                                                                           nSerMet
                                                                                                                                                                                                                                                              GlyGlyValGlyVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ω
                                                                                                                                                                                                     LeuargPhemetThrmetAsnalaGluAspGluLysArgAspAlaGluHisArg
                                                                                                                                                                                                                                                                                                                                                                                                         ProArgAspLeuSerThrSerAspThrCysValGluHisSerHisSerSerPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AN
                                                                                                                                                                                                                                                                                                                                                                             erGlyThrGl
                                                                                                                                                                                                                                 ASSOCIATED
OF DETECTION
                                                                                                                                                                                                                                                              aAla(
||||
                                                                                                                                                                                                                                                                      aA1&
                                                                                                                                                                                                                                                              GlyAspValArgProArgAspProValThrCysAlaAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                SSULT 3
S-09-949-016-13297
Sequence 13297, Application US/09949016
Patent No. 6812339
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS FILE REFERENCE: CL001307
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1303
                                                                                                                                                                                                                                                                                                                                                                                                                                       Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                      40
                                                                                                                                                                                                                                                                                                                                                                                                                                      ArgArgSerSerVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1289
                                                                                                                                                                                                                                                                                                                                                                1109
                                                                                                                                                                                                                                                                                                                                                                                                           381
                                                                                                                                                                                                                                                                                                                                                                                                                                       401
  101
                                                                        51
                                                                                                                                                                                                                                  261
                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                         229
                431
                                           491
                                                                                                                  181
                                                                                                                                             201
                                                                                                                                                                          221
                                                                                                                                                                                       791
                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                911
                                                                                                                                                                                                                                                              281
                                                                                                                                                                                                                                                                             950
                                                                                                                                                                                                                                                                                                        995
                                                                                                                                                                                                                                                                                                                                     049
                                                                                                                                                                                                                                                                                                                                                   341
                                                                                                                                                                                                                                                                                                                                                                                             1169
                              121
                                                          141
                                                                                      161
                                                                                                    611
                                                                                                                               671
                                                                                                                                                           731
                                                                                                                                                                                                                    851
                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                      321
                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                         엄
```

g

ठे

P P

ઠે

g

8

d

Š

g

8

원

δ

ઠે

a

ઠ

යු

ò

39682

39622

191

39562

171

3944

151

39742

251

40000

331

3994

39901

39865

291

		Qy         221 SerPheValTyrIleLeuThrValIleGlyAla	Qy 281 GlyAspValArgProArgAspProValThrCysAlaAlaAla :::	rpTyrLysSerArgGluLysLeuGlnT         : : :       : : : :           : : : :	1042 ATCGAGGAGTCTCACCAAGC	RESULT 5 US-09-949-016-13502 ; Sequence 13502, Application US/09949016 ; Patent No. 6812339 ; GENERAL INFORMATION: ; APPLICANT: VENTER, J. Craig et al. ; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSO; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF D ; FILE REFERENCE: CL001307 ; CURRENT APPLICATION NUMBER: US/09/949,016
Qy         332 LeuGlnTyrSerIleProMetIleIleProArgAspLeuSerThrSerAspThrCysVal         351           Db         40001 CTGCAGTACTCCATGCCCATGATCATCCCGGGGACCTCTCCACGTCCGACACGTGCGTG	ualaalaPheargGlyLeuMetLysargargSerSe :::	TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED  TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF  CURRENT APPLICATION NUMBER: US/09/949,016  CURRENT FILING DATE: 2000-04-14  PRIOR APPLICATION NUMBER: 60/241,755  PRIOR FILING DATE: 2000-10-03  PRIOR FILING DATE: 2000-10-03  PRIOR FILING DATE: 2000-10-03  PRIOR FILING DATE: 2000-09-08	1D NOS: 2070 tSEQ for Wind man 60	Alignment Scores: Pred. No.: Pred. No.: Score: Score: Fercent Similarity: S2.268 Best Local Similarity: S2.268 Indels: DB: US-09-939-483-5 (1-405) x US-09-949-016-1760 (1-1167)	1 GluAsnValArgThrLeuAlaLeuIleValCysThrPheThrTyrLeuLeuValGlyAla :::	OY 61 ArgValValLeuArgLeuLysProHisLysAlaGlyValGlnTrpArgPheAlaGlySer 80  61 ArgValValLeuArgLeuLysProHisLysAlaGlyValGlnTrpArgPheAlaGlySer 80  61 ArgValValLeuArgLeuLysProHisLysAlaGlyValGlnTrpArgPheAlaGlySer 80  61 ArgValValLeuArgLeuLysProHisLysAlaGlyValGlnTrpArgPheAlaGlySer 80  6232 CTGGTGATCCTGCAGTCGGAACCGCACCGCGCGCTCCAGTGGAATTCGCCGCTCC 291  633

```
SOCIATED DETECTION AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1065
                                                                                        140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                   160
                                                                                                                                                                                                                                                                              531
                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           340
                                  411
                                                                                                                                                                                                                                                                                                                                                                                                             591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    yrSerlleProMetilelle
rgTyrLeuLeuHisArgAla
||||||||||||
|CTACCTGCTGAAGCGCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  albeuHisPheGlnSerMet
||
|CCCGGACCTGCAGTCTGTG
                                                                                                                                                                                                                 laAsnMetValLeuIleGly
|||||||||
AGAACATGGTGACTGTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              spalaGluHisArgAlaLeu
|||||||||
argcrgaAGAGAGGCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | | streets | st
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           spThrProSerHisProCys
                                                                                                                                                                                                                                                                                                                                           laPheSerTyrTyrGluArg
||||||||
|ccrrcccaGrGrGAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     euThrThrIleGlyPheGly
|||||||||||||||||
TGACTACCATTGGGTTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       erCysLeuSerGlySerLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | | :::
GCATGGTCATTCACATCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          laAlaGlyGlyValGlyVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ||||||
rccactccatcttacaag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ------ACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 erHisSer----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         405
```

Q S

.rni

Ŋ 3

-48

σ 93 ı g 0

цB

S

```
8
                                                                                                                                                                                                                                                                                 86094
                                                                                                                                                                                                                                                                                                                                                                                                             86334
                                                                                                                                                                                                                                                                                                                                                                                                                                            86394
                                                                                                                                                                                                                                                                                                                54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            86439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         86550
                                                                                                                                                                                                                    85974
                                                                                                                                                                                                                                                   86034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           86484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          86493
                                                                                                                                                                                                                                                                  151
                                                                                                                                                                                                                                                                                                171
                                                                                                                                                                                                                                                                                                                861
                                                                                                                                                                                                                                                                                                                                191
                                                                                                                                                                                                                                                                                                                                                               211
                                                                                                                                                                                                                                                                                                                                                                                              231
                                                                                                                                                                                                                                                                                                                                                                                                                            251
                                                                                                                                                                                                                                                                                                                                                                                                                                                            271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           291
                                                                                                                                                                                                                                   eAsnThr
|-||||||
|GAACACC
                                                                                                                                                                                                                                                                                                                               (rCysPhe
                                                                                                                                                                                                                CTACGCC
                                                                                                                                                                                                                                                                                                          |||||||
                                                                                                                                                                                                                                                                                                                                                             AlaGluvalLeuHisPheGlnSerMetCysSerCysLeuTrpTyrLysSerArgGluLys
                                                                                                                                                                                                                                                                          GINThrGlnProGlnTyrValAlaPheSerPheValTyrIleLeuThrGlyLeuThrVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -- AGGTACAAG
                                                                                                                                                                                                                                                                 PheValArgTyrLeuLeuHisArgAlaLysArgGlyLeuGlyMetArgHisAlaGluVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                            yLeuGly
                                                                                                                                                                                                                                                                                                 siledly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GlyLeuSerCysLeuSerGlySerLeuGlyAspValArgProArgAspProValThrCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AlaAlaAlaAlaGlyGlyValGlyValGlyValGlyGlySerGlyPheArgAsnValTyr
                                                                                                                                                                                                     eTyral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----AGCATGGTCATTCACATCCCTGAGGAGCCGCGGCCCAGCCGGCCC
                                                                                                                                                                                                 aAlaProSerThrAspGlyGlyLysValPheCysMe
                                                                                                                             8758
                                                                                                                                 86.
169
30
73
50
                                                                                                                                                                                    (1-88758)
                                                                                                                                               Φ
                                                                                                                             Length:
Matches:
Conservative
Mismatches:
Indels:
                                                                                                                                                                                    x US-09-949-016-13502
                                                                0
                                                                                                                                                                    Gaps:
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.
SEQ ID NO 13502
LENGTH: 88758
                                                                 4
                                                                                                                             1.19e-84
774.00
61.80%
52.48%
36.77%
                                                                                                                                   Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                    US-09-939-483-5 (1-405)
                                                                                               -09-949-016-13502
                                                                                                                       Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           86395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          86440
                                                                                                                                                                                                                   5915
                                                                                                                                                                                                                                  112
                                                                                                                                                                                                                                                  5975
                                                                                                                                                                                                                                                                  132
                                                                                                                                                                                                                                                                                                 152
                                                                                                                                                                                                                                                                                                                                172
                                                                                                                                                                                                                                                                                                                                                                                                            86275
                                                                                                                                                                                                                                                                                                                                                                                                                                            6335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6494
                                                                                              ORGANISM:
                                                                                                                                                                                                                                                                                 86035
                                                                                                                                                                                                                                                                                                                6095
                                                                                                                                                                                                                                                                                                                                               6155
                                                                                                                                                                                                                                                                                                                                                               192
                                                                                                                                                                                                                                                                                                                                                                                              212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6485
                                                                                                                                                                                                                                                                                                                                                                                                                             232
                                                                                                                                                                                                                                                                                                                                                                              86215
                                                                                                                               No.:
                                                                                                                      Alignment
Pred. No.:
                                                                                       TYPE:
                                                                                                                                                                                                                  d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <del>Q</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         요
                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                ದ್ದ
                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                               ठ
                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
```

```
86748
                       86604
                                                                                                                                            403
351
                                              363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             69
                                                                                                                                         SerValSerThrGlyLeuHisSerLeuAlaAlaPheArgGlyLeuMetLysArgArgSer
||||:::||| ||||||||||||
|TCCATCTCTCTGGGTTACACAGCTTTACCGACCACCAGAGGCTGATGAAACGCCGGAAG
             -TATGGCGGCCGCTCGGTGGCACCGCAGAACTCCTTCAGCGCCAAGCTTGCCCCC
                                                                                                           -ACATTAAAAAACAGCCTCTTCCCATCGCCTATTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AlaValPheAspAlaLeuGluSerGluProGluMetIleGluArgGlnArgLeuGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ArgGlnLeuGluLeuArgAlaArgTyrAgnLeuSerGluGlyGlyTyrGluGluLeuGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AspGlyGlyLysValPheCysMetPheTyrAlaLeuLeuGlyIleProLeuThrLeuIle
                                              SerProGlyGlyGlyGlyArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LeuGlnTyrSerIleProMetIleIleProArgAspLeuSerThrSerAspThrCysVal
                                                                                        TyrSerAspThrProSerHisProCysLeuCysSerGlyThrGlnArgSerAlalleSer
                                                                                                                                                                                                                                                                                                APPLICANT: Buchman et al.

TITLE OF INVENTION: NUCLEIC ACIDS AND POLYPEPTIDES OF INVERTEBRATE
TITLE OF INVENTION: CHANNELS AND METHODS OF USE
FILE REFERENCE: 7326-104
CURRENT APPLICATION NUMBER: US/09/362,842
CURRENT FILING DATE: 1999-07-28
PRIOR APPLICATION NUMBER: 09/270,767
PRIOR FILING DATE: 1999-03-17
NUMBER OF SEQ ID NOS: 70
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 11
LENGTH: 1227
                                                            ::: |||||||
CACTACTTCCACTCCATCTTACAAGATCGAGGAGATCTCACCAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1227
167
67
114
40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              x US-09-362-842-11 (1-1227)
                                                                                                                                                                                                                                                                Sequence 11, Application US/0936284
Patent No. 6511824
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7.24e-88
773.00
60.47%
43.15%
36.72%
                                            GluHisSerHisSer
                                                                                                                                                                                                                  86754
                                                                                                                                                                                           405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-939-483-5 (1-405)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity
                                                                                                                                                                                           Serval
                                                                                                                                                                                                               TCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores
Pred. No.:
                                                                                                                                                                                                                                                     US-09-362-842-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -09-362-842-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            70
                                                                                                                                                                                                                 6749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41
332
                                              352
                                                                                                                                            384
                                                                                                                                                                                          404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 101
                                                                     86605
                                                                                                                                                                   86689
                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match:
DB:
                                                                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                  ద
                                                                                                                   셤
                      8
                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <del>Q</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
ਨੇ
                                              ò
                                                                                            ò
                                                                                                                                           ઠે
                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
```

S

0

 $\omega$ 

```
ద
                                                                                                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     THEREOF
                     140
                                                              160
                                                                                 486
                                                                                                     178
                                                                                                                                            198
                                                                                                                                                                                    218
                                                                                                                                                                                                                                                                                     771
                                                                                                                                                                                                                                                                                                                               810
                                                                                                                                                                                                                                                                                                                                                                      870
                                                                                                                                                                                                                                                                                                                                                                                          318
                                                                                                                                                                                                                                                                                                                                                                                                             900
                                                                                                                                                                                                                                                                                                                                                                                                                                333
                                                                                                                                                                                                                                                                                                                                                                                                                                                     959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    107
                                         Φ
                                                                                                                                                                603
                                                                                                                                                                                                        663
                                                                                                                                                                                                                            238
                                                                                                                                                                                                                                                723
                                                                                                                                                                                                                                                                   258
                                                                                                                                                                                                                                                                                                          278
                                                                                                                                                                                                                                                                                                                                                   298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gTyrSer
|||||:::
ATACGCA
                                                                                                                 CAAATTT
                                                                                                                                      rilegly
                   MetPheGlnSerLeuGlyGluArgIleAsnThrPheValArgTyrLeuLeuHisArgAla
||||||||||||||||
ATGTTCCAGAGCATCGGAGAAGAGTGAATAGACTGAGCCAGCTATGTTATCAAGGCGGTC
                                                                                                                                                                                  GlyValGlyValGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGln
!::
                                                                                                                                                                                                                                                                                                                                                                                                                                           CICGII
                                                                                                     rTyrTyr
                                                                                                                                                                                                                                       ValyalLeuArgPheMetThrMetAsnAlaGluAspGluLysArgAspAlaGluHisArg
                                                                                                                                                                                                                                                                                                                                                                                                                                 sLeuGln
                                                                                                                                                              TATAGGC
                                                                                                                                                                                                                            uAsnLeu
                                                                                                                                                                                                                                                                                                                             -- GAGGCCCAGGCCATGCAGGCGCTGCAAGTGGCTGTGAAG
                                                                                                                                                                                                                                                                                                                                                                   CTGGAGGGCGATGTGATAACATCCAACGGATCCATTCTGAGCGGCTACGAGGGACACGAT
                                                                                                                                                                                                                                                                                                                                                                                                             ---- AACATCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TyrSerIleProMetIleIleProArgAspLeuSerThrSerAspThrCysValGluHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCACAT
                                                             LysArgGlyLeuGlyMetArgHisAlaGluValSerMetAlaAsnMetValLeuIleGly
                                                                                                                                                                                                                                                                                                          AlaLeuLeuThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuSerGly
                                                                                                                                                                                                                                                                                                                                                   GlyVal
                                                                       US-09-949-016-60471/c

i Sequence 60471, Application US/09949016

j Sequence 60471, Application US/09949016

j Patent No. 6812339

j GENERAL INFORMATION:

j TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USE;

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USE;

TITLE REFERENCE: CL001307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR FILING DATE: 2000-10-20

PRIOR FILING DATE: 2000-10-03
                                                                                                                                                                                                                                                                                                                                                SerLeuGlyAspValArgProArgAspProValThrCysAlaAlaAlaAlaGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ::: :: CTTGGAAAAGAACAACGATGCAGAAAATCAATACAAGCTGAGGCAATCGCCGAC
                                                                                                                                          AlapheSerPheValTyrileLeuThrGlyLeuThrValIleGlyAlaPheLe
                                                                                                    GTGGGCGGGAAGCTCTTCACCATGTGCTATGCCATCGTGGGGATTCCCCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                 ----TrpTyrLysSerArgGluLy
                                                                                                                                                                                                                                                                             SerHisSerSerProGlyGlyGlyGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       372
                                                                                                                                                                                                                                                                                                                                                                                                             GGCCAATCTCTGAACGGAAGC---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AspThrProSerHisProCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1080 GAG---CCTGCACACCCTTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                SerMetCysSerCysLeu---
                                        370
                                                                                                                                                                                                                                                                                                                                                                                                                                319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        366
 310
                                                                                 430
                                                                                                                                                                                                                           219
                                                                                                                                                                                                                                                                                                                                                  279
                                                                                                                                                                                                                                                                                                                                                                      811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         334
                     121
                                                                                                                                                                                                                                                                                      724
                                                                                                                                                                                                                                                                                                                                                                                                             871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            096
                                                                                                     161
                                                                                                                        487
                                                                                                                                          179
                                                                                                                                                                544
                                                                                                                                                                                   199
                                                                                                                                                                                                        604
                                                                                                                                                                                                                                                                                                                                                                                         299
                                                                                                                                                                                                                                                                                                                                                                                                                                                    901
                                         d
                                                                               원
                                                                                                                                                              d
                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                      원
                                                                                                                                                                                                                                                                                                                                                                    ದ್ದ
                                                                                                                                                                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                                                                                                                                                                                                                                                                   d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           d
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
a
                     ð
                                                                                                                       a
                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                            à
                                                                                                    ò
                                                                                                                                           ð
                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ਠੇ
                                                                                                                                                                                   ð
```

```
ThrCysAlaAlaAlaGlyGlyValGlyValGlyValGlyGlySerGlyPheArgAsn
                                                                                                                                                                                                                                       o.
                                                                                                                                                                                                                                                                                                                                                                                                                            LeuGlyGlyLeuSerCysLeuSerGlySerLeuGlyAspValArgProArgAspProVal
                                                                                                                                                                                                                          GluvalSerMetAlaAsnMetValLeuIleGlyPheValSerCysIleSerThrLeuCy
                                                                                                                                                                                                                                                                                                                                                                                                                                           601
131
21
42
27
27
                                                                                                    Conservative:
Mismatches:
Indels:
                                                                                                                                                -016-60471 (1-601
                                                                                         Length:
Matches:
                          ٥.
                                                                                                                                  Gaps
                           4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 8
US-09-949-016-1497
; Sequence 1497, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
                                                                                                                                                x US-09-949
PRIOR APPLICATION NUMBER: 60/23;
PRIOR FILLING DATE: 2000-09-08;
NUMBER OF SEQ ID NOS: 207012;
SOFTWARE: FastSEQ for Windows V;
SEQ ID NO 60471;
LENGTH: 601
                                                                                       2.18e-70
631.50
68.78%
59.28%
30.00%
                                                                                                                                                US-09-939-483-5 (1-405)
                                                                                                                 tζ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Glu 330
                                                                                                        Percent Similarity:
Best Local Similarity
Query Match:
DB:
                                        ; LENGTH: 601
; TYPE: DNA
; ORGANISM: Human
US-09-949-016-60471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAC
                                                                                  Scores
                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                                009
                                                                                                                                                                                                                                                                                                                              210
                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                            290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           330
                                                                                                                                                                110
                                                                                                                                                                                                130
                                                                                                                                                                                                                               150
                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                               170
                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                              190
                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                             230
                                                                                                                                                                                                                                                                                                                                                                                             20
                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                             270
                                                                                                                                                                                                                                                                                                                                                                                                                                            129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            84
                                                                                          ..
No.:
                                                                                Alignment
Pred. No.:
Score:
```

209

61

301

229

241

189

421

σ

541

σ

481

69

249

181

130

269

289

309

22

S

S

9-483

93

-09

91

```
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wang,
                                                                                                                                                                                                                                                                                                                                                                                                                                                               -09-799-451-432
                                                                                                                                   1437
                                                                                                                                                                                                                                                                                                                                                       340
                                                                                                             248
                                                                                                                                                                                                                                                                                                        320
                                                                                                                                                                                                                                                                                                                                                                             1687
                  210
                                                                                                                                                                                                                                 1529
                                                                230
                                                                                      1377
                                                                                                                                                                                   1481
                                                                                                                                                                                                                                                                                                                               1649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT
                                                                                     g
                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                d
                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                              ద
                                       g
                                                                                                             ઠે
                                                                                                                                                           ò
                                                                                                                                                                                                           8
                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                       ò
                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                     δ
                             THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1316
                                                                                                                                                                                                                                                                                                                                                                                                                                       788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           92
                                                                                                                                                                                                                                                                                                                                                                                                                 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                               64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LeuGlylleProLeuThrLeuIleMetPheGlnSerLeuGlyGluArgIleAsnThrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ::: |||| :: |||| TTTGGGAAAAGCATTGCAAGAGCAAGTCAGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGGTGGTCACTCTGACCACGGTGGGCTTTTGTGTGCCA---GGGGGAAACGCT
                                                                                                                                                                                                                                                                                                                                                                                                                             ||||||||
TTGGAGCAGCCCTTTGAGAGCAGCCAGAAGAATACCATCGCCTTGGAGAAGGCGGAATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Arccerecterativasaracarcasescresacescrissasaracarritativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                              LeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGluLeuGluArgValValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GluValSerMetAlaAsnMetValLeuIleGlyPheValSerCysIleSerThrLeuCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sAspGln
                                                                                                                                                                                                                                                                                                                                                                                       cceedch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -ArgGlyLeuGlyMetArgHisAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IleGlyAlaAlaAlaPheSerTyrTyrGluArgTrpThrPhePheGlnAlaTyrTyrTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           --GlnTrpArgPheAlaGlySerPheTyrPheAlaIleThrValIleThrThrIleGly
                             USES
                                                                                                                                                                                                                                                                                                                                                                LeuAlaLeuIleValCysThrPheThrTyrLeuLeuValGlyAlaAlaValPheAspAl
                                                                                                                                                                                                                                                                                                                                                                                                                LeuGluSerGluProGluMetIleGluArgGlnArgLeuGluLeuArgGlnLeuGlu--
                ASSOCIATED
OF DETECTION AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -::|||||||||
-CAGGAGCTGGAGACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATGCTCTTGATGCTGACAATGCGGGAGTCAGTCCAATAGGAAACTCTTCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CysPhelleThrLeuThrThrlleGlyPheGlyAspTyrValAlaLeuGlnLy
                                                                                                                                                                                                                                                                                                                                                                                        Gricharcristicardresidencia
                                                                                                                                                                                                                                                       2710
117
61
167
56
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASS.
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF
FILE REFERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1497
LENGTH: 2710
                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                           x US-09-949-016-1497 (1-2710)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Arg---LeuLysProHisLysAlaGlyVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ValArgTyrLeuLeuHisArgAlaLys-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |||||||
CTGCGGGATCATGTCTGTGTGAGCCCC
                                                                                                                                                                                                                                                      6.66e-34
354.50
44.61%
29.32%
16.84%
                                                                                                                                                                                                                                                                                                                                           US-09-939-483-5 (1-405)
                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                         ORGANISM: Human
09-949-016-1497
                                                                                                                                                                                                                                            Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1260
                                                                                                                                                                                                                                                                                                                                                                                                                56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1140
                                                                                                                                                                                                                                                                                                                                                                                        699
                                                                                                                                                                                                                                                                                                                                                                                                                                       729
                                                                                                                                                                                                                                                                                                                                                                                                                                                               45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       150
                                                                                                                                                                                              TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93
                                                                                                                                                                                                                                                                                                      Query Match:
DB:
                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ਠੇ
                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ਨੇ
```

```
1436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1686
                                                                                                                                                                                                                                                              284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           371
                                                                                                                                                                                                                                                                                      --CAATGTCACGGCTGAGTTCCGGGAGACACGGCGAAGGCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Met CysSer CysLeu TrpTyrLysSerArgGluLysLeuGlnTyrSerIleProMetIle
                                                                               ---ValleuArgPheMetThrMetAsn
                                                                                                                          GCCTACTTTGCAGCTGTCCTCAGTATGATCGGAGATTGGCTACGGGTTCTGTCCAAAAAG
                                                                                                                                                                                                                                                              --LeuSerGlySerLeuGlyAspValArg
                                                                                                                                                                                              ::: ||| ||| :::
----ATCAAGGCCCATGC-GGCAGAGTG
                                                                                                                                                                                                                                                                                                                                                                                           ceregadarccacaraagerecadecedecedeceacearecaredadececedece
                                                                                                                                                                                                                                                                                                                                                                                                                                     300 ValGlyValGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGlnSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AlaGluAspGluLysArgAspAlaGluHisArgAlaLeuLeuThrHisAsnGlyGlnAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    --AspThrCysValGluHisSerHisSerSer
                                   GGCATCAATTATCGGGAGTGGTATAAGCCCCTAGTGTGGTTTTGGATCCTTGTTGGCCTT
                                                                                                                                                                                                                                                                                                                                                   -GlyGlyValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1744 TGAACAAGCATGGGCAGGGTGCGTCCGAGGACAACATCATCAACAAGTTCGGGTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ---SerAspThrProSerHisPro
AlaLeuGlnThrGlnProGlnTyrValAlaPheSerPheValTyrIl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cride---rgccc-rggacaccgccgccrtcaaggccrcar-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and
                                                                                                                                                                                                                                                                                                                                                 285 ProArgAspProValThrCysAlaAlaAlaAla---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nucleic Acids
                                                                                 ThrvallleGlyAlaPheLeuAsnLeuVal---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/799,451
CURRENT FILING DATE: 2001-03-05
NUMBER OF SEQ ID NOS: 948
SOFTWARE: pt_FL_genes Version 2.0
SOFTWARE: pt_FL_genes Version 2.0
LENGTH: 2730
                                                                                                                                                                                                                                                           268 ValGlyLeuGlyGlyLeuSerCys--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IleproArgAspLeuSerThrSer-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 432, Application US/09799451
Patent No. 6783969
GENERAL INFORMATION:
APPLICANT: Tang, Y. Tom
                                                                                                                                                                                             ::::::|||
ACAAAAGAAGAGGTGGGTGAA---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Wehrman, Tom
APPLICANT: Ghosh, Reena
APPLICANT: Drmanac, Radoje T.
TITLE OF INVENTION: No. 6783969el
TITLE OF INVENTION: Polypeptides
FILE REFERENCE: 803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           358 ProGlyGlyGlyGlyArgTyr-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Xue, Aidong J.
Zhao, Qing A.
Wang, Jian-Rui
Ma, Yunqing
Yamazaki, Victoria
Chen, Rui-hong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tang, Y. Tom
Zhou, Ping
Goodrich, Ryle
Asundi, Vinod
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yang, Yonghong
Wehrman, Tom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Asundi, Vinc.
Ren, Feiyan
                                                                                                                                                                                                                                                                                                       GAAGGC---
```

Ø

 $\infty$ 

rni

```
-016-1130
                                                                                                                                                                                                                                                                                                                                                                         US-09-949-016-1130
                                                                                                                                                                                                                                                                                                                                                                                         Scores
                                                                                                      340
                   1549
                                                                    320
                                                                                                                      1707
                                                                                                                                       358
                                                                                                                                                        1764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 65
                                   300
                                                   1609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 809
                                                                                     1669
                                                                                                                                                                                                                                                                                                                                                               ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                No.:
                                                                                                                                                                                                                                                                                                                                                                                       Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                          Score
                                                                                     d
                                                                                                                      g
                                                                                                                                                       d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                   엄
                                                                    ð
                                                                                                      ó
                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1548
                                                                                                                                                                                                                                                                                                                                       1099
                                                                                                                                                                                                                                                                                                                                                                         1159
                                                                                                                                                                                                                                                                                                                                                                                                         1219
                                                                                                                                                                                                                                                                                                                                                                                                                                            1279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1336
                                                                                                                                                                                                                                                                                     112
                                                                                                                                                                                                                                                                                                      103
                                                                                                                                                                                                                                                                                                                      132
                                                                                                                                                                                                                                                                                                                                                                                                                          189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 284
                                                                                                                               748
                                                                                                                                                                 808
                                                                                                                                                                                                                                    919
                                                                                                                                                                                                                                                                     979
                                                                                                                                                                                                                                                                                                                                                        149
                                                                                                                                                                                                                                                                                                                                                                                                                                                            209
                                                                                                                                                44
                                                                                                                                                                                 64
                                                                                                                                                                                                                   73
                                                                                                                                                                                                                                                    92
                                                                                                                                                                                                                                                                                    LeuGlyIleProLeuThrLeuIleMetPheGlnSerLeuGlyGluArgIleAsnThrPhe
|||||||||||||||
|TTTGGAATTCCACTCTTTGGTTTGGCTGGAATTGGAGACCAACTTGGAACCATC
                                                                                                                                                                                                                                                                                                                                                   -ArgGlyLeuGlyMetArgHisAla
                                                                                                                                                                                                                                                                                                                                                                                                 -CAATGTCACGGCTGAGTTCCGGGAGACACGGCGAAGGCTCAG
                                                                                                                                                                                         -caggagcrggagacgrrgarccag
                                                                                                                                                                                                                                                                                                                                                                  ::: |||| :: |||| TTTGGGAAAAGCATTGCAAGAGGTCTTTCGAAAAAAGCAAGTGAGTCAGACC
                                                                                                                                                                                                                                                                                                                                                                                                                          TYTYT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                --ValleuArgPheMetThrMetAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -LeuSerGlySerLeuGlyAspValArg
                                                                                                                             cccccca
                                                                                                                                                         ||||||
|TIGGAGCAGCCCTTTGAGAGCAGCCAGAAGAATACCATCGCCTTGGAGAAGGCGGAATTC
                                                                                                                                                                                                                             AlaLeuGlnThrGlnProGlnTyrValAlaPheSerPheValTyrIleLeuThrGlyLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GlnAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGAGTG
                                                                                                                                                                                ValLeu
                                                                                                                                                                                                                                                                                                                                                                                         eSerThrLeuCys
                                                                                                              eAspA1
                                                                                                                                                LeuGluSerGluProGluMetIleGluArgGlnArgLeuGluLeuArgGlnLeuGl
                                                                                                                                                                              LeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGluLeuGluArgVal
                                                                                                                                                                                                                                                                                                                                                                                                                         ileGlyAlaAlaAlaPheSerTyrTyrGluArgTrpThrPhePheGlnAlaTyı
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AlaGluAspGluLysArgAspAlaGluHisArgAlaLeuLeuThrHisAsnGly
                                                                                                            LeuAlaLeulleValCysThrPheThrTyrLeuLeuValGlyAlaAlaValPh
                                                                                                                      --ATCAAGGCCCATGC-GG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |||| |||| :::::::
GCCTACTTTGCAGCTGTCCTCAGTATGATCGGAGATTGGCTACGGGTTCTGTC
                                                                                                                                                                                                                                                                                                                                                                                        GluValSerMetAlaAsnMetValLeuIleGlyPheValSerCysIl
                                 2730
117
61
167
56
15
                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                             x US-09-799-451-432 (1-2730)
                                                                                                                                                                                                                  Arg---LeuLysProHisLysAlaGlyVal--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ThrVallleGlyAlaPheLeuAsnLeuVal--
                                                                                                                                                                                                                                                                                                                                                       ValArgTyrLeuLeuHisArgAlaLys-
                                                                                                                                                                                                crecesarcarercrerereaecec-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ValGlyLeuGlyGlyLeuSerCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACAAAAGAAGAGGTGGGTGAA-
                                 6.75e-34
354.50
44.61%
29.32%
16.84%
 (2086)
                                                                                             (1-405)
                                                           ζ
                                                  Percent Similarity:
Best Local Similarity
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAAGGC
; LOCATION: (473)
US-09-799-451-432
                           Scores
                                                                                            -483-5
                                                                                                                                                               749
                                                                                                                                                                                                                                                                                                                                                                                                         1160
                                                                                                                                                                                                                                                                                                                                                                        1100
                                                                                                                                                                                                                                                                                                                                                                                                                                           1220
                                                                                                                             689
                                                                                                                                                                                                 809
                                                                                                                                                                                                                                                                                                                      113
                                                                                                                                                                                                                                                                                                                                      040
                                                                                                                                                                                                                                                                                                                                                                                                                         170
                                                                                                                                                                                                                  65
                                                                                                                                                                                                                                                                     920
                                                                                                                                                                                                                                                                                                      980
                                                                                                                                                                                                                                                                                                                                                                                        150
                                                                                                                                                                                                                                                                                                                                                                                                                                                            190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 248
                                                                                                              9
                                                                                                                                                26
                                                                                                                                                                                 45
                                                                                                                                                                                                                                   860
                                                                                                                                                                                                                                                   74
                                                                                                                                                                                                                                                                                      93
                                                                                                                                                                                                                                                                                                                                                       133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  268
                         Alignment
Pred. No.:
Score:
                                                                                            US-09-939
                                                                                                                             d
                                                                                                                                                               원
                                                                                                                                                                                                원
                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                      日
                                                                                                                                                                                                                                                                                                                                                                      원
                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                          <del>Q</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  d
                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                              ò
                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ਠੇ
                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                              à
```

```
THEREOF
                                        1608
                                                                                                                1668
                                                                                                                                                                                          1706
                                                                                                                                                                                                                                                                  1763
  299
                                                                           319
                                                                                                                                                     339
                                                                                                                                                                                                                             357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              92
                                                                                                                                                                                                                                                                                                                                             1820
                                                                                                                                                                                                                                                                                                         371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         euargalaargTyrasnLeuserGluGlyGlyTyrGluGluLeuGluArgValValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATGCTCTTGATGCTGACAATGCGGAGTCAGTCCAATAGGAAACTCTTCCAACAACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -GlnTrpArgPheAlaGlySerPheTyrPheAlaIleThrValIleThrIleGly
yGlyValGly
                                                                                                   |||| |||| :::||||
| GCTGGGCCTGGACCAGGGGCCCACTCACTGGACATGCTGTCCCCCGAGAAGGGCTCTGT
                                                                                                                                                     Met CysSer CysLeuTrpTyrLysSerArgGluLysLeuGlnTyrSerIleProMetIle
                                                                                                                                                                                                                              --AspThrCysValGluHisSerHisSerSer
                                                                                                                                                                                                                                                   ---cccaggagagcarcaacaaccggcccaacaaccrgcgcctgaaggggcgccgagggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |||||||
|TTGGAGCAGCCCTTTGAGAGCAGCCAGAAGAATACCATCGCCTTGGAGAAGGCGGAATTC
                                                                          ValGlyValGlyGerGlyPheArgAsnValTyrAlaGluValLeuHisPheGlnSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AND USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LeualateullevalCysThrPheThrTyrLeuLeuValGlyAlaAlaValPheAspAl
                                                                                                                                                                                                                                                                                                                                         -SerAspThrProSerHisPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   euGluSerGluProGluMetIleGluArgGlnArgLeuGluLeuArgGlnLeuGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ASSOCIATED
OF DETECTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2730
117
61
167
56
15
                                                                                                                                                                                         crrisc---reccc-resacaccesccscrrcaageccrcar-
                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1130, Application US/09949016; Patent No. 6812339; GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF; FILE REFERENCE: CL001307; CURRENT APPLICATION NUMBER: US/09/949,016; CURRENT FILING DATE: 2000-10-20; PRIOR FILING DATE: 2000-10-20; PRIOR FILING DATE: 2000-10-03; PRIOR FILING DATE: 2000-10-03; PRIOR FILING DATE: 2000-10-03; PRIOR FILING DATE: 2000-10-03; PRIOR APPLICATION NUMBER: 60/231,498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1-2730)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
  ProArgAspProValThrCysAlaAlaAlaAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     x US-09-949-016-1130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Arg---LeuLysProHisLysAlaGlyVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 crecesarcarercrerereaecec-
                                                                                                                                                                                                                               IleProArgAspLeuSerThrSer---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Version
                                                                                                                                                                                                                                                                                                         ProGlyGlyGlyGlyArgTyr-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: Fast SEQ for Windows
SEQ ID NO 1130
LENGTH: 2730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6.75e-34
354.50
44.61%
29.32%
16.84%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-939-483-5 (1-405)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity
Query Match:
```

```
AspGluLysArgAspAlaGluHisArgAlaLeuLeuThrHisAsnGlyGlnAlaValGly
                                                                                                                                                                                                   x US-09-362-842-13
270,767
                                                                            decemlineata
PRIOR APPLICATION NUMBER: 09/PRIOR FILING DATE: 1999-03-17 NUMBER OF SEQ ID NOS: 70 SOFTWARE: Patentin Ver. 2.1
                                                                                                                      1.49e-34
354.00
46.69%
30.72%
16.82%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rrggagactacatt
                                                               TYPE: DNA
ORGANISM: Leptinotarsa
-09-362-842-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LeuValVal-
                                                                                                                                                                                                   -483-5 (1-405)
                                                                                                                                            Percent Similarity:
Best Local Similarity
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                           Glyval
                                           SEQ ID NO 13
LENGTH: 1086
                                                                                                               Scores
                                                                                                                                                                                                                                                                                                                                      280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              250
                                                                                                                                                                                                                                               160
                                                                                                                                                                                                                                                                                          220
                                                                                                                                                                                                                                                                                                                25
                                                                                                                                                                                                                                                                                                                                                                                 334
                                                                                                                                                                                                                                                                                                                                                                                                                           394
                                                                                                                                                                                                                                                                                                                                                                                                                                                   102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            808
                                                                                                                                                                                                                                                                                                                                                           72
                                                                                                                                                                                                                                                                                                                                                                                                       82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        862
                                                                                                            Alignment (
Pred. No.:
Score:
                                                                                                                        No.:
                                                                                                                                                                                                    US-09-939
                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                     엄
                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        원
                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
   .. .. .. .. .. .. ..
                                                                                                                                                                                                                                                                                                                                                                                                       1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1706
                                                                                                                                                                                                                        1279
                                                                                                                                                                                                                                                                                                                1396
                                                                                                                                                                                                                                                                                                                                                            1456
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1668
                                                                                                                                                                              1219
                                                                                                                                                                                                                                                                    1336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1763
                                            103
                                                                                        109
                                                                                                                                                        169
                                                                                                                                                                                                  189
 979
                                                                  132
                                                                                                                                                                                                                                              209
                                                                                                                                                                                                                                                                                          229
                                                                                                                                                                                                                                                                                                                                     247
                                                                                                                                                                                                                                                                                                                                                                                 267
                                                                                                                                                                                                                                                                                                                                                                                                                             284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TWIK
                                 ||||||:::
\TGCCATC
                                                               ---CCCAGGAGAGCATCAACAACCGGCCCAACAACTGCGCCTGAAGGGGCCGGAGCAGC
                                                                                                                          TITGGGAAAAGCATTGCAAGAGGTGAAAAGGTCTTTCGAAAAAAGCAAGTGAGTCAGACC
                                                                                                                                                     GluValSerMetAlaAsnMetValLeuIleGlyPheValSerCysIleSerThrLeuCys
                                                                                                                                                                  1220 ATCCCTGCTGTCATCTTTAAGTACATCGAGGGCTGGACGGCCTTGGAGTCCATTTACTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                          -CAATGTCACGCTGAGTTCCGGGAGACACGGCGAAGGCTCAG
                                                                                                                                                                                                 IleGlyAlaAlaAlaPheSerTyrTyrGluArgTrpThrPhePheGlnAlaTyrTyrTyr
                                                                                                                                                                                                                                                         AlaLeuGlnThrGlnProGlnTyrValAlaPheSerPheValTyrIleLeuThrGlyLeu
                                                                                                                                                                                                                                                                                                               GGCATCAATTATCGGGAGTGGTATAAGCCCCTAGTGTGGTTTTTGGATCCTTGTTGGCCTT
                                                                                                                                                                                                                                                                                                                                                GCCTACTTTGCAGCTGTCTCAGTATCGGAGATTGGCTACGGGTTCTGTCCAAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |||| |||| :::||||
| GCTGGGCCTGGACCAGCGCCCACTCACTGGACATGCTGTCCCCCGAGAAGCGCTCTGT
 CATAGGG
                      rAlaLeu
                                                                                                             --ArgGlyLeuGlyMetArgHisAla
                                                                                                                                                                                                                                                                                                                                     ThrvalileGlyAlaPheleuAsnLeuVal-----ValleuArgPheMetThrMetAsn
                                                                                                                                                                                                                                                                                                                                                                                                       --ATCAAGGCCCATGC-GGCAGAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                             --LeuSerGlySerLeuGlyAspValArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cgregadarccacearaaecrecaeceeceeceaccarcearecareaaeceeceece
                                                                                                                                                                                                                                              sAspGln
                                                                                                                                                                                                                                                                                                                                                                                 yGlnAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -GlyGlyValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ValGlyValGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGlnSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Met CysSer CysLeu TrpTyrLysSerArgGluLysLeuGlnTyrSerIleProMetIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sserser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1764 TGAACAAGCATGGGCAGGGTGCGTCCGAGGACAACATCATCAACAAGTTCGGGTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -SerAspThrProSerHisPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INVERTEBRATE
AGCCACTGGGACCTCGGCAGTGCCTTTTTTTTGCTGGAACTGTCATTACGAC
                    CysPhelleThrLeuThrThrIleGlyPheGlyAspTyrValAlaLeuGlnLy:::||||||||||
                                                                                                                                                                                                                                                                                                                                                                                 AlaGluAspGluLysArgAspAlaGluHisArgAlaLeuLeuThrHisAsnGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IleproArgAspLeuSerThrSer----AspThrCysValGluHisSerHi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUCLEIC ACIDS AND POLYPEPTIDES CHANNELS AND METHODS OF USE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ProArgAspProValThrCysAlaAlaAlaAla-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Buchman et al.
TITLE OF INVENTION: NUCLEIC ACIDS AND POITITLE OF INVENTION: CHANNELS AND METHODS FILE REFERENCE: 7326-104
CURRENT APPLICATION NUMBER: US/09/362,842
CURRENT FILING DATE: 1999-07-28
                                                                                                            ValArgTyrLeuLeuHisArgAlaLys-
                                                                                                                                                                                                                                                                                                                                                                                                                             ValGlyLeuGlyGlyLeuSerCys--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 13, Application US/09362842
Patent No. 6511824
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                             ACAAAAGAAGAGGTGGGTGAA-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ProGlyGlyGlyGlyArgTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-362-842-13
                                                                  113
                                                                                                                                  1100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     358
920
                                                                                       040
                                                                                                            133
                                                                                                                                                        150
                                                                                                                                                                                                                                                                                         210
                                                                                                                                                                                                                                                                                                                1337
                                                                                                                                                                                                                                                                                                                                     230
                                                                                                                                                                                                                                                                                                                                                           1397
                                                                                                                                                                                                                                                                                                                                                                                 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1707
                                                                                                                                                                                                  170
                                                                                                                                                                                                                                              190
                                                                                                                                                                                                                                                                                                                                                                                                       1457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         340
                                                                                                                                                                                                                                                                                                                                                                                                                                                  501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
                                           8
                                                                                     유
                                                                                                                                a
a
                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Б
                      ઠે
                                                                ð
                                                                                                            δ
                                                                                                                                                       ઠે
                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                           а
                                                                                                                                                                                                                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
```

```
159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       807
                                                                                                                                                                                                                                                                       393
                                                                                                                                                                                                                                                                                               101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            269
                                                                                                       32
                                                                                                    TyrPheAlaIleThrValIleThrThrIleGlyTyrGlyHisAlaAlaProSerThrAsp
                                                                                                                                                                                                                                                                                                            AlaLygArgGlyLeuGlyMetArgHisAlaGluValSerMetAlaAsnMetValLeulle
                                                                                                                                                                                                                                                                                                                                                                                                                                                    PheglyAspTyrValAlaLeuGlnLysAspGlnAlaLeuGlnThr---GlnProGlnTyr
                                                                                                                                                                   GlyPhevalSerCyslleSerThrLeuCyslleGlyAlaAlaAlaPheSerTyrTyrGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ---ArgTrpThrPhePheGlnAlaTyrTyrCysPheIleThrLeuThrThrIleGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             --ccrggagattccgccaccagccttaccgrccttatac
                                                                                                                                                     33 IleGluArgGlnArgLeuGluLeuArg---GlnLeuGluLeuArgAlaArgTyrAsnLeu
                                                                                                                                                                                                  euArgPheMetThrMetAsnAlaGlu
                                                                                                                                                                                                                                                 ----GlnTrpArgPheAlaGlySerPhe
                                                                                                                                                                                                                                                                                                                                                                                                                 CTTTCTGCTCTCGGAACGATTACTGATTCCGACAGTTTGGCTCTTGCAATGGCTTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      --ATGTTGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   craacagratttacgatataccccaactcaatrifggcctactcttcacaactagcgaa
                                                                                                                                                                                                                                                                                                                                                                                         PheGlnSerLeuGlyGluArgIleAsnThrPheValArgTyrLeuLeuHis--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          aaaataatgactacatgttaccttttcctgggtataacaataatg--
1086
102
53
111
66
Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                 (1-1086)
```

1018 GATCAGCTAGGAACTATTTTGGAAAAGGAATTGCCAAAGTGGAACACATTTATTAAG 1077   Qy	195 Th-ThilleGlyPheGlyAspTyvTalAlaleuGInLySAspGlnAlaleuGInThrCdln  1211 ACGACCATTGGATTGGACACACCTGGACGCTGGATCAGGT-  212 ProGlnTyvTalAlaPheSerPheValTyTlleLumThrGlyLeutThrGlyLeutThrCdlyCdlyCdCGCTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	Db 79 CTGGAGCCCCCACGAGCCAGCCCCAGAGGGGGGGGGGGG
	-5 Application US/09236080 6242217 CRMATION: Helen Meadows CONTEAL Chapman NVENTION: NO. 6242217el Compounds ENCE: GP30031 ENCE GP30031 ENCE GP30031 ENCE GP30031 ENCE GP30031 ENCE GP30031 S100 ENCE GP30031 ENCE GP30031 FOR Windows Version 3.0 994 Mus musculus -5 (1-405) x US-09-236-080-5 (1-1994) GludsnValbrethers: 30.72* Mismatches:	958

Ø

ø

```
AlaPheSerPheValTyril
                                                                                                                                                           (1-405)
                                                                                                                      Percent Similarity:
Best Local Similarity
Query Match:
DB:
                                                                  TYPE: DNA
ORGANISM: HOMO
-09-432-470-3
                                                                                                                                                                                                                                                                                                             GCC
                                                                                                  Scores
                                                                                                                                                           'n
                                                                                                                                                           -483
                                                                                                                                                                                        55
                                                                                                                                                                                                       26
                                                                                                                                                                                                                                                                                235
                                                                                                                                                                                                                                                                                                                                                         111
                                                                                                                                                                                                                                                                                                                                                                                                                                                               559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         619
                                                                                                                                                                          9
                                                                                                                                                                                                                                    45
                                                                                                                                                                                                                                                  175
                                                                                                                                                                                                                                                                 54
                                                                                                                                                                                                                                                                                                             295
                                                                                                                                                                                                                                                                                                                             91
                                                                                                                                                                                                                                                                                                                                           346
                                                                                                                                                                                                                                                                                                                                                                       406
                                                                                                                                                                                                                                                                                                                                                                                      131
                                                                                                                                                                                                                                                                                                                                                                                                     466
                                                                                                                                                                                                                                                                                                                                                                                                                                   499
                                                                                                                                                                                                                                                                                                                                                                                                                                                 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           199
                                                                                                                                                                                                                     D
                                                                                                                                                                                                                                                                                                                                                                                                                    151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        σ
                                                                                                                                                                                                                     1
                                                                                                        No.:
                                                                                                Alignment
Pred. No.:
                                                                                                                                                           US-09-939
                                                                                                              Score:
   d
                                                                                                                                                                                                                     쉽
                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                              d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                         ઠે
                                                                                                                                                                                                       8
                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                 218
                                                                  309
                                                                                                369
                                                                                                               130
                                                                                                                                                                                                                                    198
                                                                                                                                                                                                                                                                                                            756
                                      258
                                                                                                                              429
                                                                                                                                            150
                                                                                                                                                           462
                                                                                                                                                                          158
                                                                                                                                                                                                       178
                                                                                                                                                                                                                     582
                                                                                                                                                                                                                                                  642
                                                                                                                                                                                                                                                                                                                            248
                                                                                                                                                                                                                                                                                                                                          815
                                                                                                                                                                                                                                                                                                                                                                       875
                                                                                                                                                                                                                                                                                                                                                                                      279
                                                                                                                                                                                                                                                                                969
                                                                                                                                                                                                                                                                                               231
                                                                                                                                                                                                                                                                                                                                                                                                                    294
                       70
                                                    90
         19
                                                                                                                                                                                                                                                                                                                                                                                                      93
                                                                                                                                                                                                                                                                                                                                                        BArgAla
                                                  GGTGGCT
                                    GATGCCCTGGGAGGGGGGGGACCCAGAACCAACTCGACCAGCAACAGCAGCCACTCA
                                                                                                              gileAsn
                                                                                                                      gAlaGlu
                                                                                                                                                                         -ValSerMetAlaAsnMetValLeu
                                                                                                                                                                                                               ::: ||| ||| ||| TTCCTGCTGATCGCTGCTGCTGCTATATG
                                                                                                                                                                                                                                                                                                                                    OHISLYS
                                                                                                                                                         CATTGAA
                                                                                                                                                                                                      IleGlyPheValSerCysIleSerThrLeuCysIleGlyAlaAlaPheSerTyrTyr
                                                                                                                                                                                                                                  ----caggacTcccccggccTaTcag
                                                                                                                                                                                                                                                                                                             CACCACC
                                                                                                                                                                                 PheGlyAspTyrValAlaLeuGlnLysAspGlnAlaLeuGlnThrGlnProGlnTyrVal
                                                                                                                                                                                                                                                                                              -LeuThrVal
                                                                                                                                                                                                                                                                                                                                                                       GGCTCAGGCTGCCAGCTGGACTGGCACAGTGACAGCGCGCGTGACCCAGCGAGCCGGGCC
                                                                                                                                                                                                                                                                                                                                                                                      LeuLeuThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuSerGlySer
                                                                                                                                                                                                                                                                                                                                                                                                    CAGCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                    aAlaAla
                                                                                                                                                                                                                                                                                                                                                                                                                            --GGCATCGGTCA
                                                                                                                                                                                                                                                                                                       ThrPheValArgTyrLeuLeuHisArgAlaLysArgGlyLeuGlyMetArgHi
                                                                                                                                                                                                                                                                                                                                                                                              AlaLeuLeuGly1leProLeuThrLeuIleMetPheGlnSerLeuGlyGluAr
                       --GlyGlyTyrGluGluLeuGluArgValValLeuArgLeuLysPr
                                                                                                                                                                                                                                                                                                                                                         ----GluAspGluLysArgAspAlaGluHi
                                                                                                                                                                                                                                                                                                                                                                                                                    -AspValArgProArgAspProValThrCysAl
                                                                                                                                                                                                                                                                                                                           IleGlyAlaPheLeuAsnLeuValValLeuArgPheMetThrMetAsnAla-
                                                                                                                                                                                                                                                                          TTTGGCGACTATGTGGCCGGCGGGACCCCAGG--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 3, Application US/09432470
Patent No. 6426197
GENERAL INFORMATION:
APPLICANT: David Malcolm Duckworth
APPLICANT: Conrad Gerald Chapman
TITLE OF INVENTION: NOVEL COMPOUNDS
FILE REFERENCE: GP-30190
CURRENT APPLICATION NUMBER: US/09/432,470
                                                                                                                                                                                                                                                                                             AlaPheSerPheValTyrileLeuThrGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                AlaGlyGlyvalGlyvalGlyval 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                       993 GCCCACGCCTCGGCCCTGGATTA
                                                                                                                                                    TCCTCCCTGCGCCAT-
                                                                                                                                                                                                                                                                                                                                                                                                                   LeuGly-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -09-432-470-3
        139
                                      199
                                                                  259
                                                                                 4
                                                                                                310
                                                                                                               111
                                                                                                                            370
                                                                                                                                            131
                                                                                                                                                                                                                                                                                                                                          757
                                                                                                                                                                                                                                                                                                                                                                                                                    280
                                                                                                                                                                                                                                                                                                                                                                                                                                                295
                                                   71
                                                                                                                                                           430
                                                                                                                                                                                                                                                  583
                                                                                                                                                                                                                                                                                              219
                                                                                                                                                                                                                                                                                                            697
                                                                                                                                                                                        463
                                                                                                                                                                                                      159
                                                                                                                                                                                                                     523
                                                                                                                                                                                                                                                                                                                                                                        816
                                                                                                                                                                                                                                                                                                                                                                                      260
                                                                                                                                                                                                                                                                                                                                                                                                                                  936
                                                                                                                                                                                                                                    179
                                                                                                                                                                                                                                                                 199
                                                                                                                                                                                                                                                                               643
                                                                                                                                                                                                                                                                                                                           232
                                                                                                                                                                                                                                                                                                                                                         249
                                                                                                                                                                         151
                                    g
                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                 В
        엄
                      ઠે
                                                   ठे
                                                                                8
                                                                                               셤
                                                                                                                             셤
                                                                                                                                                         셤
                                                                                                                                                                                      a
                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                            D
D
                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                              ਠੇ
                                                                                                                                          ò
                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                              ठ
                                                                                                                                                                                                                                                                                                                                                         8
```

```
345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  178
                                                                                                                                                                                                                                                                                                                                                                           174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              732
                                                                                                                                                                                                                                                                                                                           114
                                                                                                                                                                                                                                                                                                                                                                                                                              234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        231
                                                                                                                                                                                                                                                                                                                                                                                                                                                       70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        90
                                                                                                                                                                                                                                                                                                  25
                                                                                                                                                                                                                                                                                                                                                   44
                                                                                                                                                                                                                                                                                                                                                                                                     23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LeuThrVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlyGlyTyrGluGluLeuGluArgValValLeuArgLeuLysProHisLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Thr Phe Val Arg Tyr Leu Leu His Arg Ala Lys Arg Gly Leu Gly Met Arg His Ala Glu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AlaLeuLeuGlyIleProLeuThrLeuIleMetPheGlnSerLeuGlyGluArgIleAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -GGCATCGGTCACATTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -ValSerMetAlaAsnMetValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LeuGluSerGluProGlu---MetlleGluArgGlnArgLeuGluLeuArgGlnLeuGlu
                                                                                                                                                                                                                                                                                                                                                                ||||||||||
ctgagggcccatccgtgtgtgagcgaccaggagctgggcctcctcatcaaggaggtggct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |||| :: :: ::|||
GCCATCTTCTTGAAGTGGCACGTGCCACCGGAGCTAGTAAGAGTGCTGTCGGCGATGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IleGlyPheValSerCygIleSerThrLeuCygIleGlyAlaAlaAlaPheSerTyrTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            --caecacreceecerarea
                                                                                                                                                                                                                                                                                                   ಥ
                                                                                                                                                                                                                                                                                                             ||||||||||:::
cresccrecrescscresrcrrscrrrscrrssrcrssrsccresrsrrssrscssscc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PheGlyAspTyrValAlaLeuGlnLysAspGlnAlaLeuGlnThrGlnProGlnTyrVal
                                                                                                                                                                                                                                                                                                 ieuAlaieuIleValCysThrPheThrTyrieuLeuValGlyAlaAlaValPheAspAl
                                                                                                                                                                                 121
105
105
50
127
67
                                                                                                                                                                                                         Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                         (1-1218)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTTGGCGACTATGTGGCCGGCGCGGACCCCAGG
                                                                                                                                                                                  Length:
Matches:
                                                                             0.
                                                                                                                                                                                                                                                                                                                                                                                                    euargalaargTyrasnLeuSerGlu---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       yrileLeuThrGly
CURRENT FILING DATE: 1999-11-03
EARLIER APPLICATION NUMBER: UK 9923668.9
EARLIER FILING DATE: 1999-10-07
EARLIER APPLICATION NUMBER: UK 9824048.4
EARLIER FILING DATE: 1998-11-03
NUMBER OF SEQ ID NOS: 4
SOFTWARE: FastSEQ for Windows Version 3.0
ELENGTH: 1218
               9
                                                                                                                                                                                                                                                                         US-09-432-470-3
                                                                                                                                                                               8.31e-33
341.00
44.54%
30.17%
16.20%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCTCCCTGCGCCAT
                                                                                                                                SAPIENS
                                                                                                                                                                                                                                                                           ×
```

S

```
LeuGly-
                      ည
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1077
                                                                                                                                                                                                                                                                                                                                                                                                                                  898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               280
                       400
                                                                                                                                                            571
                                                                                                                                                                                                                                                                                              724
                                                                                                                                                                                                                                                                                                                     199
                                                                                                                                                                                                                                                                                                                                          784
                                                                                                                                                                                                                                                                                                                                                                                      838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    260
                                              91
                                                                                                                                      131
                                                                                                                                                                                                                              159
                                                                                                                                                                                                                                                   664
                                                                                                                                                                                                                                                                        179
                                                                                                                                                                                                                                                                                                                                                                 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                        249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               957
                                                                                          111
                                                                                                                                                                                  151
                                                                                                                                                                                                        604
                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     임
                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                              8
                                                                 ద
                                                                                          ਨੇ
                                                                                                              엄
                                                                                                                                      ò
                                                                                                                                                           ద
                                                                                                                                                                                  ઠે
                                                                                                                                                                                                     g
                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                  1028
                                                                                                              279
                                                                                                                                                            294
                                              851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      70
                                                                                 rGlySer
                                                                                                                              CGCCGCCCCCCCCCCCCCCCCCCACCACCACTGCTGCCTCCACCGCCCTGTCCAGCGCAC
                                                                                                                                                          --AspValArgProArgAspProValThrCysAlaAlaAla
                                                                                                                                                                                CTTCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LeuAlaLeuIleValCysThrPheThrTyrLeuLeuValGlyAlaAlaValPheAspAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ||||||| ::: ||||
GATGCCCTGGGAGGGGGTGCGGACCCAGAACCAACTCGACCAGCAACAGCAGCACTCA
  ACCACC
                                   |||||||| :::|||| :::|||| ATCGGGAACTGGGCAGA-GATGGGCGGCCTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -GlyGlyTyrGluGluLeuGluArgValValLeuArgLeuLysProHisLys
                                                                    -GluAspGluLysArgAspAlaGluHisArgAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       caaaac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LeuGluSerGluProGlu---MetileGluArgGlnArgLeuGluLeuArgGlnLeuGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ||||||||
GAGGGCCCATCCGTGTGTGAGCGACCAGGAGCTGGGCCTCCTCATCAAGGAGGTGGCT
                                                                                                                                                                                                                                                                                                                    ASSOCIATED
OF DETECTION AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCGCTGGTGTTCTGGATCCTGCTCGGCCTGGCTTACTTCGCCTCAGTGCT
                                                                                        crescerisersecersererrecrrracirisersresiserecessisti
                                                                                                               LeuLeuThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuSe
                       ileGlyAlaPheLeuAsnLeuValValLeuArgPheMetThrMetAsnAla-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2733
105
50
1127
67
                                                                                                                                                                                                                                                                                                    APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF
FILE REFERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -483-5 (1-405) x US-09-949-016-1938 (1-2733)
                                                                                                                                                                                                                  ||| ||| ||||:::|||
1029 GCCACGCCTCGGCCTGGATTA 1052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LeuArgAlaArgTyrAsnLeuSerGlu-
                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version
EQ ID NO 1938
LENGTH: 2733
                                                                                                                                                                                                                                                                         Θ
                                                                                                                                                                                                                                                                      Sequence 1938, Application US/0994901
Patent No. 6812339
GENERAL INFORMATION:
                                                                                                                                                                                                       AlaGlyGlyValGlyValGlyVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3.55e-32
341.00
44.54%
30.17%
16.20%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                            LeuGly-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Human
-09-949-016-1938
                                                                                                                                                                                                                                                  T 15
-949-016-1938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores: Pred. No.:
                                                                                                              260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             340
                                                                                        852
                                                                                                                                                                                972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4
Մ
 733
                      232
                                                                   249
                                                                                                                                    912
                                                                                                                                                           280
                                                                                                                                                                                                       295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      54
                                             793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE:
                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score
                                            d
                                                                                        В
                                                                                                              ò
                                                                                                                                    요
                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                            원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                      ਠੇ
                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ਠੇ
                                                                                                                                                           ð
                                                                                                                                                                                                      ð
```

```
1016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                279
                                                                                                                                                        110
                                                                                                                                                                                                                                                                                                               130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              259
                                                                                                                                                                                                                                                                                                                                                                                          570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ::: ||| || || || TTCCTGCTGCTGCTGCTGCTTCGTGTTCTGCTATATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     --AspValArgProArgAspProValThrCysAlaAlaAla
                                   - TGGGACCTGGCCAGCGCCTTCTTTTTCTCAGGGACCATCATCACCACC
                                                                                                                                                  ---ValSerMetAlaAsnMetValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ||||||| :::||| :::||| arcegeaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaactegeagaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ||| ::: ::: ::||| GCCATCTTCTTGAAGTGGCACGTGCCACCGGAGCTAGTAAGAGTGCTGTCGGCGATGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IleGlyPheValSerCysIleSerThrLeuCysIleGlyAlaAlaAlaPheSerTyrTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PheGlyAspTyrValAlaLeuGlnLysAspGlnAlaLeuGlnThrGlnProGlnTyrVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ---GluaspGluLysArgAspAlaGluHisArgAla
AlaGlyValGlnTrpArgPheAlaGlySerPheTyrPheAlaIleThrValIleThrThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IleGlyAlaPheLeuAsnLeuValValLeuArgPheMetThrMetAsnAla-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     :40:2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AlaGlyGlyValGlyValGlyVal 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Search completed: September 16, 2005, Job time: 304 secs
```

Н

Q

S

```
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
```

```
updates/sec
                                                                     405
                  Seconds
                                                                     . STGLHSLAAFRGLMKRRSSV
                 (without alignments)
1221.522 Million cell
 model
frame_plus_p2n
                                                                                                                                         residues
                  03:50:28
                                                                                               0.5
7.0
7.0
                                                                                                                                          3331285599
                                                                     ENVRTLALIVCTFTYLLVGA.
                                                                                              Xgapext
Ygapext
Fgapext
Delext
                 2005,
using
                                                  US-09-939-483-5
2105
                  16,
                                                                                                                                          seds,
                                                                                  BLOSUM62
Xgapop 10.0
Ygapop 10.0
Fgapop 6.0
Delop 6.0
search,
                  September
                                                                                                                                          7389322
nucleic
                                                                    -
                                                             score:
                                                                                      table
OM protein
                                                                     Sequence:
                                                                                     Scoring
                                                            Perfect
                  on:
                                                   Title:
                 Run
```

Total number of hits satisfying chosen parameters: 14778644 Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Maximum DB seq length: 2000000000 Post-processing: Minimum Match 0%

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
Command line parameters:

Command line parameters:
-MODEL=frame+ p2n.model -DEV=xlh
-Q=/cgn2 1/USPTO\_spool/US09939483/runat 15092005 111358\_9638/app\_query.fasta\_1.583
-Q=/cgn2 1/USPTO\_spool/US09939483/runat 15092005 111358\_9638/app\_query.fasta\_1.583
-DB=Published Applications NA -QFMT=fastap -SUFFIX=rnpb -MINMATCH=0.1
-LOOPCL=0 -LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62
-TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR\_SCORE=pct -THR\_MAX=100
-THR\_MIN=0 -ALIGN=15 -MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0
-MAXIEN=200000000 -USER=US09939483 @CGN 1 1 810 @runat 15092005 111358 9638
-NCFU=6 -ICPU=3 -NO MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -DSPBLOCK=100
-LONGLOG -DEV TIMEOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5
-FGAPOP=6 -FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7

Published Applications NA:\*

1: /cgn2\_6/ptodata/2/pubpna/USO7\_PUBCOMB.seq:\*

2: /cgn2\_6/ptodata/2/pubpna/PCT\_NEW\_PUB.seq:\*

3: /cgn2\_6/ptodata/2/pubpna/USO6\_PUBCOMB.seq:\*

4: /cgn2\_6/ptodata/2/pubpna/USO6\_PUBCOMB.seq:\*

5: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

7: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

7: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

8: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

10: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

11: /cgn2\_6/ptodata/2/pubpna/USO9\_PUBCOMB.seq:\*

12: /cgn2\_6/ptodata/2/pubpna/USO9\_PUBCOMB.seq:\*

13: /cgn2\_6/ptodata/2/pubpna/USO9\_NEW\_PUB.seq:\*

14: /cgn2\_6/ptodata/2/pubpna/USO9\_NEW\_PUB.seq:\*

15: /cgn2\_6/ptodata/2/pubpna/USO9\_NEW\_PUB.seq:\*

16: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

16: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

16: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

17: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

18: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

19: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

20: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

21: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

22: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

23: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

24: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

25: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

26: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

27: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

28: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

29: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

20: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

22: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

23: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

24: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

25: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

26: /cgn2\_6/ptodata/2/pubpna/USO8\_PUBCOMB.seq:\*

Pred. No. is the number of results predicted by chance to have a

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		•				
Result No.	or i	Query	Length	DB	ID	Description
	1819	86.	1551	22	US-10-820	Sequence 202,
7 r	83		2514	o 0	S-09-939-	e 3, App
7 V	ם ב			ر م	US-US-959-465-3 [18-10-146-733-7	equence 3, Appr Semience 7, Appr
· ເກ	18		ហ	222	S-10-756-149	equence 4089, A
9	42	7	S		-08-816-011-52	quence 52, Appl
7	42	7.	926	21	S-10-870-492	Sequence 52, Ap
<b>α</b>	32	ъ.	854	თ	US-09-746-491-55	55, A
	10	ä	1122	16	8-10-146-733	e 42,
	10	'n.	1125	_	-09-798-584-2	2, Ap
	10	, ,	1248		8-10-257-022-2	equence 21,
	20	ς.		16	S-10-146-733	Seguence 40,
	110	3	m (	σ,	-09-798-584-5	equence 5, A
	20.		N	ο (	S-09-746-491-5	56, App
	0	0 0	N	ο, ι	09-746-491-	equence 57, App
	, S		D (		-10-1/3-999-	equence 41,
	, ,	· ·	0 0		-10-146-/33-	e 4, App
	χ, 4, (		2 6	4 6	S-10-146-733-	sequence 6,
	4 4 7 C	o c	_		17-164-95/-60	, 21,
	•			ן א	, כ	ָר היי
	7 C		V		-10-140-/53-1 -10-257-022-2	equence 1, Appr
1 0	. œ		ָר דר	1 2	-10-336-472-	equence 23, App
0	) ("	. 6			-10-336-472-7	emence 77. App
	(M	 	1113		-336-472-	e 83,
7	m	σ.	1200		-10-146-733-3	equence 3, Appl
	•	7.	'n		-450-763-	equence 29264,
	72	4.		σ	09-864-761-17	quence 17873, A
	•	ж Э	α		S-10-363-345A-1613	ce 16137,
	13.	щ			S-10-363-345A-1613	equence 16138,
m	13.	٠ س	887	21	S-10-363-483A-1	equence 1613
	13.	M	8		S-10-363-483A-1613	equence 16138,
m	-	m m			-10-363-345A-1613	equence 16139,
m	┥,	m .	B		S-10-363-345A-1614	equence 16140,
	_	m m	8		-10-363-483A-1613	equence 16139,
	-	m ·	B	21	S-10-363-483A-1614	equence 16140,
	Ч	σ.	Н		-10-074-978A-23	equence 23, App
	21	4.	539		-10-424-599-735	equence 73575,
	•	ς.	45	22	-10-756-149-14	equence 1478,
	36	7			-10-461-862-	equence 128, A
	•	7	87		US-10-451-892-9	equence 9, App
	62.			10	-09-852-386-3	-
	62.	7.	2523		-10-461-8	equence 131, Ap
	9	7		18	US-10-459-190-3	ence 3,

RESULT 1
US-10-820-474A-202
; Sequence 202, Application US/10820474A
; Publication No. US20050155089A1
; GENERAL INFORMATION:
; APPLICANT: LAL, PREETI
; APPLICANT: TANG, Y. TOM
; APPLICANT: GORGONE, GINA A.
; APPLICANT: GUEGLER, KARL J.
; APPLICANT: AUSUGHN, MARIAH R.
; APPLICANT: AUSUGHN, INGRID E.
; APPLICANT: AUYOUNG, JANICE
; APPLICANT: PATTERSON, CHANDRA
; APPLICANT: PATTERSON, CHANDRA
; APPLICANT: REDDY, ROOPA

Ø

```
761
                                                                                                                                                                                                                                                                                                                   1079
                                                                                                                                                                                                                                                                                                                                                                     401
                   581
                                                                                    701
                                                                                                    241
                                                                                                                                     261
                                                                                                                                                                     281
                                                                                                                                                                                                    301
                                                                                                                                                                                                                                     321
                                                                                                                                                                                                                                                    959
                                                                                                                                                                                                                                                                                      019
                                                                                                                                                                                                                                                                                                                                     381
                                                                                                                                                                                                                                                                                                                                                                                    1199
     181
                                     201
                                                                    221
                                                                                                                                                    821
                                                                                                                                                                                     860
                                                                                                                                                                                                                     905
                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 2
US-09-939-
                                                                                                                     В
                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                    g
                                                                                    g
                                                                                                                                                    셤
                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                                                                                                                                                     d
                                                                     ઠે
                                                                                                     ð
                                                                                                                                                                     ò
                                                                                                                                                                                                     ਠੇ
                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                     ਨੇ
                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                    8
                                     ઠે
                                                                                                                                     8
                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                             340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                             280
                                                                                                                                                                                                                                                                                                                                                                                                                                              100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             580
                                                                                                                                                                                                                                                                                                                                                            160
                                                                                                                                                                                                                                                                                                                                            40
                                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                            GlyAla
                                                                                                                                                                                                                                                                                                                                                                                                            aglyser
                                                                                                                                                                                                                                                                                                                                                                                                                           CGGCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ullegly
                                                                                                                                                                                                                                                                                                                                                                           GluArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: HILLMAN, JENNIFER L.
APPLICANT: BANDMAN, OLGA
TITLE OF INVENTION: SIGNAL PEPTIDE-CONTAINING MOLECULES
FILE REFERENCE: 039386-1568
CURRENT APPLICATION NUMBER: US/10/820,474A
CURRENT FILING DATE: 2004-04-07
PRIOR APPLICATION NUMBER: 09/720,533
PRIOR FILING DATE: 2001-03-20
PRIOR FILING DATE: 1999-06-25
PRIOR FILING DATE: 1999-06-26
PRIOR FILING DATE: 1998-06-26
PRIOR FILING DATE: 1998-06-26
PRIOR FILING DATE: 1998-07-31
PRIOR FILING DATE: 1998-10-01
PRIOR FILING DATE: 1998-10-01
SRIOR FILING DATE: 1998-10-01
SRO ID NOS: 269
SOFTWARE: PatentIn version 3.3
SEQ ID NO 202
                                                                                                                                                                                                                                     551
                                                                                                                                                                                                                                      1 8 9 9 1 2
1 8 9 9 1 2
                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                             (1-1551)
                                                                                                                                                                                                     1229438
                                                                                                                                                                                                                                                                                             x US-10-820-474A-202
                                                                                                                                                                                                     Clone No:
                                                                                                                                                                                                                                   2.9e-199
1819.00
90.37*
88.15*
86.41*
                                                                                                                                                                                          // NAME/KEY: misc feature
// OTHER INFORMATION: Incyte
US-10-820-474A-202
                                                                                                                                                                   TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                             -483-5 (1-405)
                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity
Query Match:
                                                                                                                                                                                                                             Scores:
                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                             21
                                                                                                                                                                                                                                                                                                                                                                             41
                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                             221
                                                                                                                                                                                                                                                                                                                                                                                                                                             81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              141
                                                                                                                                                                                                                                                                                                                             41
                                                                                                                                                                                                                                                                                                                                                                                             161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             521
                                                                                                                                                                                                                                                                                                                                                                                                                                                              281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101
                                                                                                                                                                                    FEATURE
                                                                                                                                                                                                                                     . No. :
                                                                                                                                                                                                                             Alignment
                                                                                                                                                                                                                                                                                             US-09-939
                                                                                                                                                                                                                                              Score:
                                                                                                                                                                                                                                     Pred
                                                                                                                                                                                                                                                                             DB
                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                            Б
                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <del>Q</del>
                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
```

```
US-09-994-94-3
US-09-994-484-3
US-09-994-484-3
US-09-994-484-3
Sequence 3, Application US/09939484
Fatent No. US20020032322A1
GENERAL INFORMATION:
FAPLICANT: Duprat, Fabrice
APPLICANT: Leasde, Florian
APPLICANT: Lazdunski, Michel
APPLICATION NUMBER: US/09/939,484
FRIOR FILING DATE: 1998-09-01
PRIOR FILING DATE: 1998-09-01
PRIOR FILING DATE: 1998-08-04
PRIOR APPLICATION NUMBER: 60/095,234
PRIOR APPLICATION NUMBER: FR 96/01565
PRIOR APPLICATION NUMBER: FR 96/01565
PRIOR APPLICATION NUMBER: FR 96/01565
NUMBER OF SEQ ID NOS: 24
SOFTWARE: PatentIn Ver. 2.0
                                                220
                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                               380
 00
                      640
                                                                                                240
                                                                                                                       760
                                                                                                                                               260
                                                                                                                                                                       820
                                                                                                                                                                                               280
                                                                                                                                                                                                                                                                                               320
                                                                                                                                                                                                                                                                                                                      958
                                                                                                                                                                                                                                                                                                                                               340
                                                                                                                                                                                                                                                                                                                                                                                                                       107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              400
                                                                                                                                                                                                                       859
                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                        904
                                                                                                                                                                                                                                                                                                                                                                        101
                                                                                                                                                                                                                                                                                                                                                                                              GlyAspValArgProArgAspProValThrCysAlaAlaAlaAlaGlyGlyValGlyVal
                                                                                                                                                                                                                                                               405
```

Ţ

Q

Ø

· rnpb

-5

-483

939.

09

1112

340

1052

320

1172

360

1232

g

셤

8

셤

Š

요

ઠે

d

ठे

a

8

g

ठ

원

ð

8

ð

d

δ

ठ

ઠે

셤

ठ

8

δ

380

1292

```
GENERAL INFORMATION:

GENERAL INFORMATION:

GENERAL INFORMATION:

APPLICANT: Lesage, Florian

APPLICANT: Lesage, F
                                                                              GlyValGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGlnSerMet
                                                                                                                                 CysSerCysLeuTrpTyrLysSerArgGluLysLeuGlnTyrSerIleProMetIleIle
                                                                                                                                                  GlyGlyArgTyrSerAspThrProSerHisProCysLeuCysSerGlyThrGlnArgSer
                                                                                                                                                                                                                                                                                       AlalleserSerValSerThrGlyLeuHisSerLeuAlaAlaPheArgGlyLeuMetLys
                                                                                                                                                                                                                                                    GlyAspValArgProArgAspProValThrCysAlaAlaAlaAlaGlyGlyValGlyVal
                                                                                                                                                                                   2514
357
9
25
14
                                              Conservative:
Mismatches:
Indels:
Gaps:
     CTCACGCGCAACGGGCAGGCGGCGGCGGCGGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-2514)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    x US-09-939-483-3
                                                                                                                                                                                                                                                                                                                                                                    1307
                                                                                                                                                                                                                                                                                                                                          ArgArgSerSerVal 405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5.95e-199
1819.00
90.37%
88.15%
86.41%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: TASK
-09-939-483-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 2. SOFTWARE: Patentin Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-405)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: CDS
LOCATION: (126)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-939-483-5
                                                                                                                                                                                                                                                                                                                                                                                                              -483-3
                                                                                                                                                                                                                                                                                                                                                                    1293
     915
                                                                                                                                                          1053
                                                                                                                                                                                                              1113
                                                                                                                                                                                                                                                                                                                                           401
                             281
                                                                               301
                                                                                                        999
                                                                                                                                                                                      341
                                                                                                                                                                                                                                                               1173
                                                                                                                                                                                                                                                                                         381
                                                                                                                                                                                                                                                                                                                  1233
                                                      954
                                                                                                                                  321
                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score:
                                                                                                        В
                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                      d
                                                     g
                                                                              à
                                                                                                                                  ð
                                                                                                                                                         d
                                                                                                                                                                                    à
                                                                                                                                                                                                            ద
                             ठे
                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                             100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              914
                                                                                                                                                                                                                                                                             194
                                                                                                                                                                                                                                                                                                                                                                                  314
                                                                                                                                                                                                                                                                                                                                                                                                                                     374
                                                                                                                                                                                                                                                                                                                              254
                                                                                                                                                                                                                                                                                                     40
                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                           80
                                                                                                                                                                                                                                                                                                                                                                                                                              111111
10060TCC
                                                                                                                                                                                                                                                 |||||||
                                                                                                                                                                                                                                                                                                                                                                         GCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              uGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ySerLeu
                                                                                                                                                                                                                                                                                                                                                         uLeuGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               lAlaPhe
                                                                                                                                                                                                                                                                                                                                                                                                            aGlyser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rGluArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AspTyrValAlaLeuGlnLysAspGlnAlaLeuGlnThrGlnProGlnTyrVa.
                                                                                                                                                                                                                                                                                                   ArgvalvalteuArgLeuLysProHisLysAlaGlyvalGlnTrpArgPheAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LeuThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuSerGl
                                                                                                                                 514
57
                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                        -484-3 (1-2514)
                                                                                                                                                                                                                          -939
                                                                                                                                 99
                                                                                                                              5.95e-19
1819.00
90.37%
88.15%
86.41%
                                                                                                                                                                                                                         x US-09
                                                                 .307)
TASK
                            sapiens
LENGTH: 2514
TYPE: DNA
ORGANISM: Homo sapie:
FEATURE:
NAME/KEY: CDS
LOCATION: (126)..(130)
OTHER INFORMATION: Ti
                                                                                                                                                                                                                         -405)
                                                                                                                                                        ty:
arity
                                                                                                                                                                                                                          こ
                                                                                                                                          Score:
Percent Similarit
Best Local Simila
Query Match:
DB:
                                                                                                                    Scores
                                                                                                                                                                                                                          -483-5
                                                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                                         41
                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                              195
                                                                                                                                                                                                                                                                                                                                                                                 255
                                                                                                                                                                                                                                                                                                                                                                                                                                     315
                                                                                                                                                                                                                                                                                                                                                                                                                                                              81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         261
                                                                                                                                                                                                                                                                            135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              855
                                                                                                                                . No. .
                                                                                                                    gnment
                                                                                                                                                                                                                          σ
                                                                                                                                                                                                                          93
                                                                                                                                                                                                                          -60-SN
                                                                                                                   Aligi
Pred
                                                                                          0
     d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             d
```

10:05:46

Sep 17

<b>q</b> 0	ζ G	ò	<u>අ</u>	8	දි දි	· 유	ò	. d	RES								r-sn	Ali	Scol	One.	Sn	ò	q <sub>Q</sub>	δ <i>t</i>	<u> </u>	<del>3</del>	}	· 名	8	qa	. & —
	res: 6.22e-199 Length: 1819.00 Matches: 3.37% Conservative: 9	milarity: 88.15% Mismatches: 86.41% Indels: 16 Gaps:	-5 (1-405) x US-10-146-733-7 (1-2590)	1 GluAsnyalArgThrLeuAlaLeuIleValCysThrPheThrTyrLeuLeuVal	:::	21 AlaValPheAspAlaLeuGluSerGluProGluMetIleGluArgGlnArgLeuGluLeu 40	195 GCGGTCTTCGACGCGCTGGAGTCGGAGCCCGAGCTGATCGAGCGGCAGCGGCTGGAGCTG 254	41 ArgGlnLeuGluLeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGluLeuGlu 60 	1 ArgValValLeuArgLeuLvsProHisLysAlaGlyValGlnTrpArgPheAlaGlySer 8		PheTyrPheAlaIleThrValIleThrThrIleGlyTyrGlyHisAlaAlaProSerThr 10	S TICIACITICECCATCACCATCACCACCATCGGCCACGCGCACCCAGCACG 4	Ol AspGlyGlyLysvalPneCysMetPhelyrAlaLeuLeuGlylleProLeuThrLeulle	5 GATGGCGGCAAGGTGTTCTGCATGTTCTACGCGCTGGGCCATCCCGCTCACGCTCGTC	1	ATGTTCCAGAGCCTGGGCGAGCGCATCAACACCTTGGTGAGGTACCTGCTGCACCGCGCC	1 LysArgGlyLeuGlyMetArgHisAlaGluValSerMetAlaAsnMetValLeuIleGly 1	S AAGAAGGGGCTGGGCATGCGGCGCGCCGACGTGTCCATGGCCAACATGGTGCTCAGGC	161 PhevalSerCyslieSerThrLeuCyslieGlyAlaAlaAlaPheSerTyrTyrGluArg 180 	181 TrpThrPhePheGlnAlaTyrTyrTyrCysPheIleThrLeuThrThrIleGlyPheGly 200	ACCTTCTTCCAGGCCTACTACTGCTTCATCACCCTCACCAC	201 AspTyrValAlaLeuGlnLysAspGlnAlaLeuGlnThrGlnProGlnTyrValAlaPhe 220 	1 SerPhevalTyrileLeuThrGlyLeuThrvalileGlyAlaPheLeuAsnLeuValVal		241 LeuArgPheMetThrMetAsnAlaGluAspGluLysArgAspAlaGluHisArgAlaLeu 260	CGAGGACGAGAGCGCGACGCCGAGCACCGCGCG	261 LeuThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuSerGlySerLeu 280	ĠĊĠĠĊĠĠŔĠĠĠ	81 GlyAspValArgProArgAspProValThrCysAlaAlaAlaAlaGlyGlyValGlyVal 3	54 GGCAGCGCACACTACGGACACCCTCATCCACGGCGGCAGCG	301 GlyvalGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGlnSerMet 320
	Alignment Sco Pred. No.: Score: Percent Simil	Best Lo Query M DB:	0-60-SN		qa	ò	qa	රු දි	3 8	. q	8 8	α č	Š i	QQ (	ò	qq	જે ત	an i	& <u>a</u>	ò	DÞ	රු සි	ò	Ορ	ò	Ωþ	ò	QQ	ठे १	Q A	ò

```
Solur 3

10.756-149-4089

20.01 3

20.01 5

20.01 5

20.01 5

20.01 5

20.01 5

20.01 756-149-4089

Sequence 4089, Application US/10756149

Publication No. US20050181375A1

GENERAL INFORMATION:

APPLICANT: Zlotnik, Albert

TITLE OF INVENTION: NOVEL METHODS OF DIAGNOSIS OF METASTATIC CANCER

TITLE OF INVENTION: METHODS OF SCREENING FOR MODULATORS OF METASTATIC CANCER

FILE REFERENCE: file

CURRENT APPLICATION NUMBER: US/10/756,149

CURRENT FILING DATE: 2004-01-12

NUMBER OF SEQ ID NOS: 5818

SOFTWARE: Patentin version 3.2

SEQ ID NO 4089

LENGTH: 2590

MANDER OF SED DATE

SEQ ID NO 4089

LENGTH: 2590
                                                                               1172
                                                                                                                         1232
                                                                                                                                                                  1292
                                                           360
                                                                                                    380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AlaIleSerSerValSerThrGlyLeuHisSerLeuAlaAlaPheArgGlyLeuMetLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -GGCGGCGCGCCTTCCGCAACGTCTACGCGGAGGTGCTGCACTTCCAGTCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                      2590
357
9 25
14
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-2590)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               x US-10-756-149-4089
                                                                                                                                                                                      401 ArgArgSerSerVal 405
||||||||||||||||||||||||1293 CGCAGGAGCTCCGTG 1307
                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                      6.22e-19
1819.00
90.37%
88.15%
86.41%
                                                                                                                                                                                                                                                                                                                                                                                                               Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -5 (1-405)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rcent Similarity:
st Local Similarity:
ery Match:
                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Homo 8
-10-756-149-4089
                                                                                                                                                                                                                                                                                                                                                                                                                                           ignment Scores
                                                                                                                                                                  1233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           375
                                                             341
                                                                                1113
                                                                                                                        1173
                                                                                                                                              381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        81
666
                    321
                                        1053
                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -483
                                                                                                                                                                                                                                                                                                                                                                                                                                                        No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -09-939
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ed. 1
ore:
```

120

AspGlyGlyLysValPheCysMetPheTyrAlaLeuLeuGlyIleProLeuThrLeuIle

S

셤

ò

셤

ò

g

ठे

d

ð

요

ò

셤

à

Ø

```
956
1290
144
1
                    Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
Mismatches:
Indels:
                                                                                                                                                         Version #1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               x US-08-816-011-52 (1-956)
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
                                                                       COUPLING.

ZIP: 07054

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Versi
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/816,011
FILING DATE: 11-MAR-1997
CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: Matthews, Gale F.
REGISTRATION NUMBER: 32,269
REFERENCE/DOCKET NUMBER: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                   Products
            ET: One Campus Drive: Parsippany
3: New Jersey
TRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                1.03e-153
1422.00
98.31%
97.97%
67.55%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-939-483-5 (1-405)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity
Query Match:
DB:
               ADDRESSEE:
STREET: One
CITY: Parsi
STATE: New
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                         US-08-816-011-52
                                                                                                                                                                                                                                                                                                                                                                                                                                       Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         426
                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment S
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <del>Q</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1292
                                            140
                                                                                                    160
                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                              260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       400
                 494
                                                                                                                             614
                                                                                                                                                                                   674
                                                                                                                                                                                                               200
                                                                                                                                                                                                                                         734
                                                                                                                                                                                                                                                                     220
                                                                                                                                                                                                                                                                                                                                                     854
                                                                                                                                                                                                                                                                                                                                                                                                           914
                                                                                                                                                                                                                                                                                                                                                                                                                                      280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      998
                                                                                                                                                                                                                                                                                               794
  |||||:::
                                            BArgAla
|||||||
|CCGCGCC
                                                                                                                                                                        |||||
cgagcac
                                                                                                                                                                                                                                                                                                                                             CGTGGTG
                                                                                                                      CATCGGC
                                                                                                                                                                                                                              CTTCGGC
                                                                                                ullegly
                                                                                                                                                                                                              YPheGly
                                                                                                                                                                                                                                                                                     GCCTTC
                                                                                                                                                                                                                                                                                                                        uValVal
                                                                                                                                                                                                                                                                                                                                                                           .GlyVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rGluArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      lAlaPhe
                                                                                                                                                                                                           GlyAspValArgProArgAspProValThrCysAlaAlaAlaAlaGlyGlyVal
e Sequences
Using Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ||||
| GGCAGCGCGCACACTACGGACACCGCCTCATCCACGGCGGCAGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                n Channels, Nucleotide
Them, and Methods of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 6
US-08-816-011-52
; Sequence 52, Application US/08816011
; Publication No. US20030165806A1
; GENERAL INFORMATION:
; APPLICANT: Price, Laura A.
APPLICANT: Pausch, Mark H.
TITLE OF INVENTION: Potassium Char
; TITLE OF INVENTION: Encoding Them
; NUMBER OF SEQUENCES: 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SerPheVal1
                435
                                                                                                                           555
                                                                                                                                                                                                                                                                                            735
                                                                                                                                                                                                                                                                                                                                                                                                       855
                                          121
                                                                     S
                                                                                                141
                                                                                                                                                                                                                                      675
                                                                                                                                                                                                                                                                  201
                                                                                                                                                                                                                                                                                                                        221
                                                                                                                                                                                                                                                                                                                                                   795
                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                             915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1293
                                                                                                                                                      161
                                                                                                                                                                                 'n
                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                    261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             401
                                                                     49
```

g

ð

g

ò

В

ð

日

ઠે

d

ò

d

ð

ò

d

ò

ò

```
uGluLeu
```

365

80

40

120

425

140

485

160

Ø

```
and Nucleic Acids Encoding
                                                                                                                                                                                                                                          220
                                                                                                                                                                                                                                                                                                     260
                                                                                                                                                                545
                                                                                                                                                                                180
                                                                                                                                                                                                                                                                        240
                                                           100
                                                                                       120
                                                                                                       425
                                                                                                                      140
                                                                                                                                                  160
                                                                                                                                                                                               605
                                                                                                                                                                                                             200
                                                                                                                                                                                                                            665
                                                                                                                                                                                                                                                                                                                   842
                                                                                                                                                                                                                                                                                                                                  280
                245
                                            305
                                                                                                                                   85
                                                                                                                                                                                                                                                         724
                                                                                                                                                                                                                                                                                                                                                 902
                              80
                                                                                                                                                                                                                                                                        Met PheglnSerLeuGlyGluArgIleAsnThrPheValArgTyrLeuLeuHisArgAla
                                                                                                                                                                               PhevalSerCysIleSerThrLeuCysIleGlyAlaAlaAlaPheSerTyrTyrGluArg
                                                                                                                                                                                                                                          29
                                                                                                                                                                                                                                                                                                                                                               Proteins
                                                                                                                                                                                                                                                                                                                                                                                          RESULT 8
US-09-746-491-55
; Sequence 55, Application US/09746491
; Patent No. US20020137202A1
; GENERAL INFORMATION:
; APPLICANT: Burgess, Catherine E.
; TITLE OF INVENTION: No. US20020137202A1e1
; FILE REFERENCE: 15966-621
; CURRENT APPLICATION NUMBER: US/09/746,491
; CURRENT FILING DATE: 2000-12-20
; PRIOR APPLICATION NUMBER: USSN 60/171,329
; PRIOR FILING DATE: 1999-12-21
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 55
; LENGTH: 854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; ORGANISM: Homo US-09-746-491-55
                                                                                                                                    426
                                                                                                                                                   141
                                                                                                                                                                                                              181
                                                                                                                                                                                                                                           201
                                                                                                                                                                                                                                                                                                                                                                               903
               186
                               61
                                             246
                                                           81
                                                                         306
                                                                                       101
                                                                                                       366
                                                                                                                      121
                                                                                                                                                                  486
                                                                                                                                                                                 161
                                                                                                                                                                                               546
                                                                                                                                                                                                                            909
                                                                                                                                                                                                                                                          999
                                                                                                                                                                                                                                                                         221
                                                                                                                                                                                                                                                                                       725
                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                    783
                                                                                                                                                                                                                                                                                                                                   261
                                                                                                                                                                                                                                                                                                                                                  843
                                                                                                                                                                                                                                                                                                                                                                281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment
                                                                                                      <del>Q</del>
                                                                                                                                    d
                                                                                                                                                                셤
                                                                                                                                                                                               В
                                                                                                                                                                                                                            <del>Q</del>
                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                  셤
               엄
                                           g
                                                                         원
                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                           ਨੇ
                              ઠે
                                                           ò
                                                                                       ਨੇ
                                                                                                                      ð
                                                                                                                                                  ठ
                                                                                                                                                                                 ઠે
                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                ਠੋ
180
                                                           220
                                                                                       240
                                            665
                                                                                                                      260
                                                                                                                                                   280
               605
                              200
                                                                         724
                                                                                                       782
                                                                                                                                    842
                                                                                                                                                                  902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40
                                                                                                                                                                                                                  Sequence 52, Application US/10870492

Sequence 52, Application US/10870492

Publication No. US20050032165A1

GENERAL INFORMATION:

TITLE OF INVENTION: POTASSIUM CHANNELS, NUCLEOTIDE SEQUENCES ENCODING THEN

TITLE OF INVENTION: AND METHODS OF USING SAME

FILE REFERENCE: 01142.0114 SEQUENCE LISTING

CURRENT APPLICATION NUMBER: US/09/503,849

PRIOR APPLICATION NUMBER: US/09/503,849

PRIOR FILING DATE: 2000-02-15

PRIOR FILING DATE: 1997-03-11

PRIOR FILING DATE: 1995-10-25

PRIOR FILING DATE: 1995-10-25

PRIOR FILING DATE: 1995-10-31

NUMBER OF SEQ ID NOS: 74

SOFTWARE: Patentin Ver: 2.1

SEQ ID NO 52
 rgluarg
||||||||
|CGAGCGC
                            llGlyAla
||||||||
cGGCGCC
                                                                                                                                                 GGC-TTC
                                                                                       1AlaPhe
                                                         295
                                                                                                                                                                                               950
                                                                                                                                                                              956
290
1
4
1
                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-939-483-5 (1-405) x US-10-870-492-52 (1-956)
                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                          1.03e-153
1422.00
98.31%
97.97%
67.55%
                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
ORGANISM: Mus musculus
-10-870-492-52
                                                                                                                                                                                                                                                                                                                                                                                                                                 Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores
               546
                                           909
                                                                                       221
                                                                                                                      241
                                                                                                                                                  261
                                                                                                                                                                843
                                                                                                                                                                               281
 161
                                                          201
                                                                                                      725
                                                                                                                                   783
                                                                                                                                                                                               903
                             181
                                                                         999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         126
                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                                                         a
a
              원
                                           요
                                                                                                     요
                                                                                                                                   된
                                                          8
                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <del>Q</del>
                              8
                                                                                       δ
                                                                                                                     ò
                                                                                                                                                  δ
                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
 ઠે
```

Same

· rnpb

Ŋ 1

483

σ 93

60-

```
IC47611, IC47615,
AND 53763 MOLECULES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AlaValPheAspAlaLeuGluSerGluProGluMetIleGluArgGlnArgLeuGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1122
229
48
86
50
       (-7, IC23927, T)
alpha2delta-4,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-939-483-5 (1-405) x US-10-146-733-42 (1-1122)
TITLE OF INVENTION: NOVEL TWIK-6, TWIK-7, IC
TITLE OF INVENTION: HRMDA-1, TWIK-9, alpha2,
TITLE OF INVENTION: HRMDA-1, TWIK-9, alpha2,
TITLE OF INVENTION: AND USES THEREFOR
FILE REFERENCE: MNI-248
CURRENT APPLICATION NUMBER: US/10/146,733
CURRENT PILING DATE: 2000-02-29
PRIOR PILING DATE: 2000-02-29
PRIOR FILING DATE: 2000-02-29
PRIOR FILING DATE: 2000-03-03
PRIOR FILING DATE: 2000-04-07
PRIOR PILING DATE: 2000-04-07
PRIOR PILING DATE: 2000-04-07
PRIOR PILING DATE: 2000-04-07
PRIOR PILING DATE: 2000-04-10
PRIOR PILING DATE: 2000-04-10
PRIOR PILING DATE: 2000-04-26
PRIOR PILING DATE: 2000-04-26
PRIOR PILING DATE: 2000-09-19
PRIOR PILING DATE: 2000-09-25
PRIOR PILING DATE: 2000-12-15
PRIOR PILING DATE: 2000-12-16
PRIOR PILING DATE: 2000-12-18
PRIOR PILING DATE: 2000-12-18
PRIOR PILING DATE: 2000-12-18
PRIOR PILING DATE: 2000-12-18
PRIOR PILING DATE: 2001-04-06
PRIOR PILING DATE: 2001-04-06
PRIOR PILING DATE: 2001-04-06
PRIOR PILING DATE: 2001-04-11
PRIOR PILING DATE: 2001-04-12
PRIOR PILING DATE: 2001-04-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 2001-09-25
APPLICATION NUMBER: US 09/964,256
FILING DATE: 2001-09-25
APPLICATION NUMBER: US 10/024,623
FILING DATE: 2001-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2.06e-116
1100.00
67.07%
55.45%
52.26%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 81
SOFTWARE: Patentin Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .. (1122)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA ORGANISM: HOMO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      : CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . No. :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             core:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                             100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                       129
                                                                                                                                                                                                                                    189
                                                                                                                                                                                                                                                                                     249
                                                                                                                                                                                                                                                                                                                                    309
                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                   369
                                                                                                                                                                                                                                                                                                                                                                                                           140
                                                                                                                                                                                                                                                                                                                                                                                                                                  429
                                                                                                                                                                                                                                                                                                                                                                                                                                                          160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           789
                                                                                                                                                                40
                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                              80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gAlaLeu
||||||||
cgcgcrg
                                                                                                                                                                                                                                                           Glyser
                                                                                                                                                            SerThr
                                                                                                                                                                                                                                                                                                                                                         ArgGlnLeuGluLeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGluLeuGlu
||||||||
|GGCAGCAGGAGCTGCGGGCGCGTACAACCTCAGCCAGGGCGGCGAGGAGGTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                       PheValSerCysIleSerThrLeuCysIleGlyAlaAlaAlaPheSerTyrTyrGluArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     aPhe
                                                                                                                                                                                                                                                                                   CGGCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGTGGTG
                                                                                                                  GlyAla
                                                                                                                                                                                                                                                                                                                                  CAGCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ileGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SGCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PheGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     uValVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Al
                                                                                                                                                                                                                                                          54
57
       00071700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  272
                             ive
s:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (1-854)
    Length:
Matches:
Conservati
Mismatches
Indels:
Gaps:
                                                                                         -491-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-146-733-42; Sequence 42, Application US/1014673; Publication No. US20030165891A1; GENERAL INFORMATION:
; APPLICANT: Curtis, Rory A.J.; APPLICANT: Glucksmann, Maria A.; APPLICANT: Silos-Santiago, Inmacu
   1.07e-142
1326.00
97.06%
94.49%
62.99%
                                                                                      x US-09
                                                                                       (1-405)
                                          갂
   Pred. No.:
Score:
Percent Similarit
Best Local Simila
Query Match:
DB:
                                                                                       S
                                                                                       3-
                                                                                                                                                                                    70
                                                                                                                                      10
                                                                                                                                                                                                                                                                                   190
                                                                                                                                                                                                                                                                                                                                                                                310
                                                                                                                                                                                                                                                                                                                                                                                                                              370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             490
                                                                                                                                                               21
                                                                                                                                                                                                                                    130
                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                            81
                                                                                                                                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                                                                                                                                                                                                                        141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90
                                                                                                                                                                                                             41
                                                                                                                                                                                                                                                                                                                                                           101
                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                       -48
                                                                                       -939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
US-10-1
                                                                                       -09
                                                                                       us
                                                                                                                                                                                   원
                                                                                                                                                                                                                                                                                  원
                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <del>a</del>
                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          임
                                                                                                               ઠે
                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ठे
```

69

939-

9

пB

```
1083
                                                100
                                                         309
                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                           102
129
                                      249
                                                                    120
                                                                                       140
                                                                                                429
                                                                                                          160
                                                                                                                    489
                                                                                                                              180
                                                                                                                                        549
                                                                                                                                                  200
                                                                                                                                                           609
                                                                                                                                                                     220
                                                                                                                                                                               699
                                                                                                                                                                                         240
                                                                                                                                                                                                  729
                                                                                                                                                                                                            260
                                                                                                                                                                                                                     789
                                                                                                                                                                                                                               280
                                                                                                                                                                                                                                         828
                                                                                                                                                                                                                                                             852
                                                                                                                                                                                                                                                                      320
                                                                                                                                                                                                                                                                                888
                                                                                                                                                                                                                                                                                         340
                                                                                                                                                                                                                                                                                                   939
                                                                                                                                                                                                                                                                                                             356
                                                                                                                                                                                                                                                                                                                       999
                                                                                                                                                                                                                                                                                                                                                     392
                   189
                                                                             369
                             80
          9
                            aglyser
                                  CGGCTCC
                                                                                                                                                                                                                                                                                                                                                    PhevalSerCysIleSerThrLeuCysIleGlyAlaAlaAlaPheSerTyrTyrGluArg
                                                                                                                                                CAAAGCC
         GGTCGTC
                                                                                                                                                                                                                               ySerLeu
                                                                                                                                                                                                                                                                           --AGGTACAAGGCGGACGTCCCGGACCTGCAGTCTGTG
                                                                                                                                                                                                                                                                                        erProGlyGlyGlyArgTyrSerAspThrProSerHisProCys
                                                                                                                                                                                        nSerMet
                                                                                                                                                                                                                                                                                                                                           --ACA
                                                                                                                                                                                                                                         - AGCATGGTCATTCACATCCCT
                                                                                                                                                                                                                                                 GlyAspValArgProArgAspProValThrCysAlaAlaAlaAlaGlyGlyValGlyVal ::: |||||||
                            GCCGTGTTCGACGCCCTCGAGTCGGACCACGAGATGCGCGAGGAGGAGAAACT
                                                                                                                                                                                                                               euThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuSerGl
                                                                                                                                                                                                                                                                      GlyvalGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGl
                                                                                                                                                                                                                                                            GAGGAGCCGCGCCCAGCCGGCCC
                                                                                                                                                                                                                                                                                                                                          ATCGAGGAGATCTCACCAAGC--
                                                                                                                                                                                                                                         creecegaaacegeaac
                                                                                                                                                                                                                                                                                                                                                              1024
                                                                                                                                                                                                                                                                                                                                          1000
                                                                                                370
70
                                      190
                                                         250
                                                                    101
                                                                             310
                                                                                                          141
                                                                                                                    430
                                                                                                                                       490
                                                                                                                                                  181
                                                                                                                                                           550
                                                                                                                                                                     201
                                                                                                                                                                                                  670
                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                   889
                                                                                                                                                                                                                                                                                                             341
                                                                                                                                                                                                                                                                                                                       940
                                                                                                                                                                                                                                                                                                                                                     373
                                                                                                                              161
                                                                                                                                                                               610
                                                                                                                                                                                         221
                                                                                                                                                                                                                     730
                                                                                                                                                                                                                                261
                                                                                                                                                                                                                                         790
                                                                                                                                                                                                                                                   281
                                                                                                                                                                                                                                                             829
                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                853
                                                                                      121
                                                                                                                                                                                                                                                                                          321
                                                                                                                                                                                                                                                                                                                                                              d
                            ઠે
                                                                            8
                                                                                                                                                                                                                                                                                                                       셤
                                      셤
                                                         셤
                                                                                               g
                                                                                                          8
                                                                                                                   g
                                                                                                                                       a
                                                                                                                                                           a
                                                                                                                                                                              d
                                                                                                                                                                                                  원
                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                                                                                                     ઠે
          ठे
                   셤
                                                ઠે
                                                                   ò
                                                                                      8
                                                                                                                             ð
                                                                                                                                                 ઠે
                                                                                                                                                                     δ
                                                                                                                                                                                        δ
                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                 ठ
```

```
Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      160
                                                                                                                                                                                                                                                                                                                                                                                                   129
                                                                                                                                                                                                                                                                                                                                                                                                                                      189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                               20
                                                                                                                                                                                                                                                                                                                                                                69
                                                                                                                                                                                                                                                                                                                                                                                  40
                                                                                                                                                                                                                                                                                                                                                                                                                                                        80
                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                      PhevalSerCysIleSerThrLeuCysIleGlyAlaAlaAlaPheSerTyrTyrGluArg
                                                                                                                                                                                                                                                                                                                                              ArgGlnLeuGluLeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGluLeuGlu
                                                                                                                                                                                                                                                                                                                                                                                                                               MetPheGlnSerLeuGlyGluArgIleAsnThrPheValArgTyrLeuLeuHisArgAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LysArgGlyLeuGlyMetArgHisAlaGluValSerMetAlaAsnMetValLeuIleGly
                                                                                                                                                                                                                            DNA
                                                                                                         Channel
                                                                                                                                                                                                                            genomic
                                                                                                          Potassium
                                                                                                                                                                                                                            frame from
                                                                                                                                                                                                                                                             1125
229
48
86
50
5
                 1122
405
                                                                           APPLICANT: Mu, David
APPLICANT: Mu, David
APPLICANT: Powers, Scott
APPLICANT: Tularik Inc.
TITLE OF INVENTION: KCNB: A No. US20020102676A1e1
FILE REFERENCE: 018781-004010US
CURRENT APPLICATION NUMBER: US/09/798,584
CURRENT FILING DATE: 2001-03-03
PRIOR PILING DATE: 2000-03-03
               Acceaccaccaecaecreareaaacecceeaaerecerr
                                                                                                                                                                                                                                                                                Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                           preducted KCNB open reading
                                                                                                                                                                                                                                                                                                                             (1-1125)
                                                                                                                                                                                                                                                               Length:
Matches:
 '8ArgArg8
                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                             x US-09-798-584-2
                                                   Sequence 2, Application US/09798584
Patent No. US20020102676A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                              2.07e-116
1100.00
67.07%
55.45%
52.26%
AlaAlaPheArgGlyL
                                                                                                                                                                      2.1
                                                                                                                                                              . 18
                                                                                                                                                            NUMBER OF SEQ ID NOS: 18
SOFTWARE: Patentin Ver.
EQ ID NO 2
                                                                                                                                                                                       LENGTH: 1125
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                             US-09-939-483-5 (1-405)
                                                                                                                                                                                                                  FEATURE:
; OTHER INFORMATION:
US-09-798-584-2
                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity
Query Match:
DB:
                                                                                                                                                                                                                                                        Scores
                                             -09-798-584-2
                                                                                                                                                                                                                                                                                                                                                                 10
                 1084
                                                                                                                                                                                                                                                                                                                                                                                                                                       130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              250
393
                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           161
                                                                                                                                                                                                                                                               No.:
                                                                                                                                                                                                                                                       gnment
                                   RESULT
                                                                                                                                                                                                                                                                          Score:
                                                                                                                                                                                                                                                      Align
Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                                                                                                                ਠੇ
                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
 ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ठ
```

```
LysArgGlyLeuGlyMetArgHisAlaGluValSerMetAlaAsnMetValLeuIleGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ArgGlnLeuGluLeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGluLeuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGluleuGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AspGlyGlyLysValPheCysMetPheTyrAlaLeuLeuGlyIleProLeuThrLeuIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1248
229
48
86
50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                ION CHANNELS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -022-21 (1-1248)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7472584CB1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
APPLICANT: LU, Dyung Aina M.
APPLICANT: LU, Yan
APPLICANT: GREENE, Barrie D.
APPLICANT: RAUMANN, Brigitte E.
APPLICANT: RAUMANN, Brigitte E.
APPLICANT: Arvizu, Chandra S.
TITLE OF INVENTION: TRANSPORTERS AND ION CH
FILE REFERENCE: PI-0067 USN
CURRENT APPLICATION NUMBER: US/10/257,022
CURRENT APPLICATION NUMBER: US01/11206
PRIOR APPLICATION NUMBER: 60/196,872
PRIOR FILING DATE: 2000-04-06
PRIOR APPLICATION NUMBER: 60/199,020
PRIOR FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: 60/200,552
PRIOR FILING DATE: 2000-04-28
PRIOR FILING DATE: 2000-04-28
PRIOR FILING DATE: 2000-04-28
PRIOR FILING DATE: 2000-04-28
PRIOR FILING DATE: 2000-05-01
PRIOR APPLICATION NUMBER: 60/203,495
PRIOR FILING DATE: 2000-05-01
NUMBER OF SEQ ID NOS: 30
SOFTWARE: PERL PROGRAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ID No:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            x US-10-257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2.41e-116
1100.00
67.07%
55.45%
52.26%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
NAME/KEY: misc feature
OTHER INFORMATION: Incyte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-939-483-5 (1-405)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PERL
SEQ ID NO 21
LENGTH: 1248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores Pred. No.: Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1083
                                            200
                                                                              609
                                                                                                                 220
                                                                                                                                                   699
                                                                                                                                                                                      240
                                                                                                                                                                                                                       729
                                                                                                                                                                                                                                                            260
                                                                                                                                                                                                                                                                                             789
                                                                                                                                                                                                                                                                                                                               280
                                                                                                                                                                                                                                                                                                                                                                 828
                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                      852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   666
                                        YPheGly
                                                                                                            GACTACGTGGCCCTGCAGGGTGCCTGCAGAAAGCCGCTCTACGTTYrValAlaPhe
                                                                                                                                                                                 IGAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlyValGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGlnSerMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LeuCysSerGlyThrGlnArgSerAlaIleSerSerValSerThrGlyLeuHisSerLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ----AGGTACAAGGCGGACGTCCCGGACCTGCAGTCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        --ACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCTTT
                                                                            GTTCGGG
                                                                                                                                                                                                                                                                                                                            LeuThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuSerGlySerLeu
                                                                                                                                                                                                                                                                                                                                                                ---AGCATGGTCATTCACATCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SerProGlyGlyGlyGlyArgTyrSerAspThrProSerHisProCys
                                                                                                                                                                                                                                                                                                                                                                                                   .GlyVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCTTCTCCTGCATGGGACGCTGTGCATCGGGGCGGCCGCCTTCTCCCAGTG
                                       GlyAspValArgProArgAspProValThrCysAlaAlaAlaAlaGlyGlyVa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ProArgAspLeuSerThrSerAspThrCysValGluHisSerHisSer-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGGAGCCGCGCCCAGCCGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1000 ATCGAGGAGATCTCACCAAGC----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TANG, Y. Tom
KHAN, Farrah A.
TRIBOULEY, Catherine M.
GANDHI, Ameena R.
YAO, Monique G.
SANJANWALA, Madhusudan M
BAUGHN, Mariah R.
NGUYEN, Danniel B.
POLICKY, Jennifer L.
                                                                                                                                                                                                                                                                                                                                                               CTCGCCGGAÁACCGCAAC---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 21, Application US/102
Publication No. US20030211499A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REDDY, Roopa
THORNTON, Michael
BOROWSKY, Mark L.
TANG, Y. Tom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEILHAMER, Jeffrey
WALIA, Narinder K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LAL, Preeti
KEARNEY, Liam
WALSH, Roderick 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Henry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -10-257-022-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
       490
                                                                                                                                                610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1024
                                         181
                                                                                                                                                                                                                                                                                          730
                                                                                                                                                                                                                                                                                                                              261
                                                                                                                                                                                                                                                                                                                                                                                                   281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        373
                                                                             550
                                                                                                                                                                                                                      670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                              201
                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           321
                                                                                                                                                                                    221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
       임
                                          δ
                                                                          d
                                                                                                                                              셤
                                                                                                                                                                                                                    유
                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                   Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     а
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                              ठ
                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
```

249

189

80

9

129

40

69

120

69

140

309

160

S

u đ S

```
Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       x US-10-146-733-40 (1-1262)
                                                                                           DR APPLICATION NUMBER: US 60/139, 799

DR FILING DATE: 2000-04-26

DR APPLICATION NUMBER: US 60/235, 018

DR FILING DATE: 2000-09-19

DR APPLICATION NUMBER: US 60/235, 059

DR APPLICATION NUMBER: US 60/256, 240

DR APPLICATION NUMBER: US 60/256, 240

DR APPLICATION NUMBER: US 60/256, 588

DR APPLICATION NUMBER: US 60/256, 588

DR APPLICATION NUMBER: US 60/256, 588

DR APPLICATION NUMBER: US 09/796, 720

DR APPLICATION NUMBER: US 09/828, 035

DR APPLICATION NUMBER: US 09/828, 035

DR APPLICATION NUMBER: US 09/833, 081

OR FILING DATE: 2001-04-06

DR APPLICATION NUMBER: US 09/843, 128

OR FILING DATE: 2001-04-11

OR APPLICATION NUMBER: US 09/843, 128

OR FILING DATE: 2001-04-12

OR APPLICATION NUMBER: US 09/964, 256

OR APPLICATION NUMBER: US 10/024, 623

OR APPLICATION NUMBER: US 10/024, 623
 R APPLICATION NUMBER: US 09/518,866
R FILING DATE: 2000-03-03
R APPLICATION NUMBER: US 60/195,734
R FILING DATE: 2000-04-07
R APPLICATION NUMBER: US 60/195,993
R FILING DATE: 2000-04-11
R APPLICATION NUMBER: US 60/199,799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.45e-116
1100.00
67.07%
55.45%
52.26%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .. (1136)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OF SEQ ID NOS: 8RE: PatentIn Ver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -483-5 (1-405)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: HOMO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; NAME/KEY: CDS
; LOCATION: (15)
US-10-146-733-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ) ID NO 40
ENGTH: 1262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores
Pred. No.:
Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
 PRIOR APPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ਠੋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11, IC47615,
53763 MOLECULES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1083
                   489
                                              180
                                                                          549
                                                                                                       200
                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                      729
                                                                                                                                                                                                                                                                                                               789
                                                                                                                                    609
                                                                                                                                                                 220
                                                                                                                                                                                              699
                                                                                                                                                                                                                                                                                   260
                                                                                                                                                                                                                                                                                                                                            280
                                                                                                                                                                                                                                                                                                                                                                         828
                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             372
                                                                                                                                                                                                                                                                                                                                                                                                                                    52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGCTTT
                                                                                                                                                                                                                                                                               gAlaLeu
                                                                                                      lyPheGly
|||||||||
3GTTCGGG
                                                                                                                                                                                       GGCCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ||||||
|GTCTGTG
                                                                                                                                                                 lalaPhe
                                            GlyvalGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGlnSerMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     aSerren
LeuThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuSerGlySerLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          --ACA
                                                                                                                                                                                                                                                                                                                                                                                                    GlyAspValArgProArgAspProValThrCysAlaAlaAlaAlaGlyGlyValGlyVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sProCys
                                                                                                                                                                                                                                                                                                                                                                       CATCCCT
                                                                                                      AspTyrValAlaLeuGlnLysAspGlnAlaLeuGlnThrGlnProGlnTyrVa
                                                                                                                                                                                 LeuCysSerGlyThrGlnArgSerAlaIleSerSerValSerThrGlyLeuHi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |||| ::: ||| |||||||| TTAAAAAACAGCCTCCATCCCATCGCCTATTAGCTCCATCTCCTGGGTTACA
                                                                                                                                                                                                                                                                                                                                                                         -AGCATGGTCATTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ProGlyGlyGlyArgTyrSerAspThrProSerHi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           , IC476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -AGGTACAAGGCGGACGTCCCGGACCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         c-7, IC23927, TWIK-8, IC47
alpha2delta-4, 54414, AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ProArgAspLeuSerThrSerAspThrCysValGluHisSerHisSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Curtis, Rory A.J.
APPLICANT: Glucksmann, Maria A.
APPLICANT: Silos-Santiago, Inmaculada
TITLE OF INVENTION: NOVEL TWIK-6, TWIK-7, IC
TITLE OF INVENTION: HNMDA-1, TWIK-9, alpha2
TITLE OF INVENTION: AND USES THEREFOR
FILE REFERENCE: MNI-248
CURRENT APPLICATION NUMBER: US/10/146,733
CURRENT FILING DATE: 2002-05-15
PRIOR APPLICATION NUMBER: US 60/185,938
PRIOR FILING DATE: 2000-02-29
PRIOR FILING DATE: 2000-02-29
                                                                                                                                                                                                                                                                                                                                                                                                                                 gaggagccgcddcccagccggccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 40, Application US/10146733 Publication No. US20030165891A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCGAGGAGATCTCACCAAGC--
                                                                                                                                                                                                                                                                                                                                                                         cricecegana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -10-146-733-40
                430
                                                                                                                                                                                                                                                     670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1000
                                                                                                                                                                                             610
                                              161
                                                                          490
                                                                                                       181
                                                                                                                                    550
                                                                                                                                                                 201
                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                               730
                                                                                                                                                                                                                                                                                                                                             261
                                                                                                                                                                                                                                                                                                                                                                                                       281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1024
                                                                                                                                                                                                                          221
                                                                                                                                                                                                                                                                                                                                                                                                                                    829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       373
                                                                          a
                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                   d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                       ठ
                                                                                                                                   원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                             ઠે
                                                                                                                                                                 8
                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                     ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
```

143

40

1262 229 48 86 50

4.00 10 10

203

9

263

Ø Ø

ı

-09

8

Protein

Channel

Breast)

UTRB

```
GAGGAGATCCGGATCAAGGGGAAGTACAACATCAGCAGCGAGGGACTACCGGCAGCTGGAG
                                                                                                                                                                                                                                                                                                                  ArgGlnLeuGluLeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGluLeuGlu
                                                                                                                                                                                                                                                                                                                                              PheTyrPheAlaIleThrValIleThrThrIleGlyTyrGlyHisAlaAlaProSerThr
                                                                                                                                                                                                                                                                                                                                                                                                                                LysArgGlyLeuGlyMetArgHisAlaGluValSerMetAlaAsnMetValLeuIleGly
                                                                                                                                                                                                                                                                                                                                                                                                                                       Potassium
                                                                                                                                          expressed
                                                                                                               ě
                                                                                                                                                                    2312
229
48
86
50
5
                                                                                                               and
                                                                                                             OTHER INFORMATION: full length cDNA including 5' of OTHER INFORMATION: breast cancer cell line ZR7530 NAME/KEY: CDS LOCATION: (41)..(1165)
OTHER INFORMATION: human KCNB (Potassium Channel elepatron)
                      US20020102676Alel
                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                     x US-09-798-584-5 (1-2312)
                                                                                                                                                                                                Indels
APPLICANT: Mu, David
APPLICANT: Powers, Scott
APPLICANT: Tularik Inc.
TITLE OF INVENTION: KCNB: A No. US200201
FILE REFERENCE: 018781-004010US
CURRENT APPLICATION NUMBER: US/09/798,584
CURRENT FILING DATE: 2001-03-03
PRIOR APPLICATION NUMBER: US 60/186,951
PRIOR FILING DATE: 2000-03-03
NUMBER OF SEQ ID NOS: 18
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 5
LENGTH: 2312
                                    584
                                                                                                                                                                                                        Gaps
                                                                                                                                                                    6.02e-116
1100.00
67.07%
55.45%
52.26%
                                                                                          TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
                                                                                                                                                                                                                     (1-405)
                                                                                                                                                                           Score:
Percent Similarity:
Best Local Similarity
                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                     US-09-939-483-5
                                                                                                                                                                                                                                                              21
                                                                                                                                                                                                                                                50
                                                                                                                                                                                                                                                                                                                                 230
                                                                                                                                                                                                                                                                                                                                                             290
                                                                                                                                                                                                                                                                                                                                                                                        350
                                                                                                                                                                                                                                                                           110
                                                                                                                                                                                                                                                                                                      170
                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                          101
                                                                                                                                                                                                                                                                                                                                                                                                                   410
                                                                                                                                                                                                                                                                                                                                                                                                                                 141
                                                                                                                                                                                                                                                                                                                                                                                                                                              470
                                                                                                                                                                                                                                                                                                                                                                                                                                                            161
                                                                                                                                                                                                                                                                                                                                               81
                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                Query Match:
DB:
                                                                                                                                                                      . No. .
                                                                                                                                                                      Pred
                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                1013
                                                                                                                                                                                                                                                                                                                                                                                                                                       1097
                                                                                                                                                                                                                                                                                                                                                                                                            1037
                             120
                                                         140
                                                                                    160
                                                                                                               180
                                                                                                                            563
                                                                                                                                          200
                                                                                                                                                                     220
                                                                                                                                                                                                240
                                                                                                                                                                                                                           260
                                                                                                                                                                                                                                                       280
                                                                                                                                                                                                                                                                    842
                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                866
                                                                                                                                                                                                                                                                                                             320
                                                                                                                                                                                                                                                                                                                           902
                                                                                                                                                                                                                                                                                                                                        340
                                                                                                                                                                                                                                                                                                                                                                    356
                                                                                                                                                                                                                                                                                                                                                                                              372
                                                                                                                                                                                                                                                                                                                                                                                                                         392
               323
                                           383
                                                                                                 503
                                                                                                                                                       623
                                                                                                                                                                                  683
                                                                                                                                                                                                              743
                                                                                                                                                                                                                                          803
                                    |||||:::
ACTGGTC
                                                      GGTGGCA
                              Ð
                                                                                  AspTyrValAlaLeuGlnLysAspGlnAlaLeuGlnThrGlnProGlnTyrValAlaPhe
                                                                                                                                                                                                                          TGGCACC
                                                                                                                                                                                                                                                                  -AGCATGGTCATTCACATCCCT
                                                                                                                                                                                                                                                                                                                                                                                              вРгосув
                                                                                                                                                                                                                                                                                                                                                                                                            --ACA
                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGCTTT
  oSerThr
                                                                                                                                                                                               uValVal
                                                                                                                                                                                                             Garcarc
                                                                                                                                                                                                                                                                                                                                       tileile
                                                                                                                                                                                                                                                                                                                                                                                                                          sSerLeu
                                                                                                                                                                                                                                                       SerLen
                                                                                                                                                                                                                                                                                  1GlyVal
                             eull
PheTyrPheAlalleThrVallleThrThrIleGlyTyrGlyHisAlaAlaPro
                                                                                                                                                                                              - rargeceeccerc
                                                                                                                                                                                                                                                                                                                                                                                            erProGlyGlyGlyGlyArgTyrSerAspThrProSerHi
                                                                                                                                                                                                                                                                                                                                                                                                                       CysSerCysLeuTrpTyrLysSerArgGluLysLeuGlnTyrSerIleProMe|
|||||||||
|GCTCCTGCACCTGCTACCGCTCGCAGGAC-----TATGGCGGCCGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                    405
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCGAGGAGATCTCACCAAGC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SSULT 13
5-09-798-584-5
Sequence 5, Application US/09798:
Patent No. US20020102676A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1098
                                                                                                 444
                                                                                                                                                                                                                                        744
                                                                                                                                                                                                                                                                   804
                                                                                                                                                                                                                                                                                                                                                                                                            1014
                                                                                                                                                                                                                                                                                                                                                                                                                                                    393
              264
                                         324
                                                                     384
                                                                                                                           504
                                                                                                                                                      564
                                                                                                                                                                    201
                                                                                                                                                                                 624
                                                                                                                                                                                                             684
                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                    903
                                                                                                                                                                                                                                                                                                                                                                                                                                      1038
 81
                            101
                                                       121
                                                                                   141
                                                                                                             161
                                                                                                                                        181
                                                                                                                                                                                               221
                                                                                                                                                                                                                                                      261
                                                                                                                                                                                                                                                                                 281
                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                         867
                                                                                                                                                                                                                                                                                                                                       321
                                                                                                                                                                                                                                                                                                                                                                                954
                                                                                                                                                                                                                                                                                                                                                                                                                        373
                                                                                                                                                                                                                                                                                                                                                                  341
                                                                                                                                                                                                                                                                                                                                                                                             357
                                                                                                                                                                                                                                                                 g
             g
                                                                    g
                                                                                                           ò
                                                                                                                          g
                                                                                                                                                     d
                                                                                                                                                                                 a
                                                                                                                                                                                              ò
                                                                                                                                                                                                           g
                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                              원
                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                          d
                            ò
                                         유
                                                       8
                                                                                               원
                                                                                                                                        8
                                                                                                                                                                    8
                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                    d
                                                                                                                                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
```

289

80

169

9

40

100

349

120

409

140

469

160

Φ

180

589

200

649

590

. . .

g

93

9

0

8

```
PheGlnSerLeuGlyGluArgIleAsnThrPheValArgTyrLeuLeuHisArgAlaLys
                                                                                                                                                                                                                                                                                               Alaalaglygly------valglyvalglyvalglyvalgly alglyvalgly algly algorithms are algorithms.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rgThrLeuAl
                                                                                                        57
                                                                            197
                                                                                                                                                                                                                         497
                                                                                                                                                                                                                                                                                 617
                                                                                                                                                                                                                                                                                                                           222
                    77
                                                 137
                                                               42
                                                                                           62
                                                                                                                       82
                                                                                                                                                   102
                                                                                                                                                                 377
                                                                                                                                                                                122
                                                                                                                                                                                             437
                                                                                                                                                                                                                                                                   182
                                                                                                                                                                                                                                                                                               202
                                                                                                                                                                                                                                                                                                            677
                                                                                                                                                                                                                                                                                                                                        737
                                                                                                                                                                                                                                                                                                                                                                                                  857
                                                                                                                                                                                                                                                                                                                                                                                                                 269
                                                                                                                                                                                                                                                                                                                                                                                                                                             289
                                                                                                                                     317
                                                                                                                                                                                                            142
                                                                                                                                                                                                                                                                                                                                                        242
                                                                                                                                                                                                                                                                                                                                                                     797
                                                                                                                                                                                                                                                                                                                                                                                    256
        N
        8 8
                                              පු
                                                                            셤
                                                                                         ò
                                                                                                        g
                                                                                                                                    셤
                                                                                                                                                  ð
                                                                                                                                                                 셤
                                                                                                                                                                                             g
                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                   Š
                                                               ठे
                                                                                                                      ठ
                                                                                                                                                                                8
                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                             ਠੋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                               Same
                                                                                                                                                                                                                                                                                                                                                               Encoding
                            240
                                         769
                                                       260
                                                                                    280
                                                                                                  868
                                                                                                                                            320
                                                                                                                                                          928
                                                                                                                                                                        340
                                                                                                                                                                                       9
1AlaPhe
|||||||
GGCCTTT
                          uValVal
                                                                                                                                                                                 GGTGGCA
                          --ACA
                                                                                                                                                                        tileile
                                                                                    ySerLeu
                                                                                                                                                                                                                                 вРгосув
                                                                                                  -AGCATGGTCATTCACATCCCT
                                                                                                                GlyVal
                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                               Acid
LeuThrHisAsnGlyGlnAlaValGlyLeuGlyGlyLeuSerCysLeuSerGl
                                                                                                                                                                        CysSerCysLeuTrpTyrLysSerArgGluLysLeuGlnTyrSerIleProMe
                                                                                                                                                                                                                                                                    |||| ::: ||| ||||||||| TTAAAAAACAGCCTCTTCCCATCGCCTATTAGCTCCATCTCCTGGGTTACA
                                                                                                                GlyAspValArgProArgAspProValThrCysAlaAlaAlaAlaGlyGlyVa
                                                                                                                                            GlyvalGlyGlySerGlyPheArgAsnValTyrAlaGluValLeuHisPheGl
                                                                                                                                                                                       -rargececcerc
                                                                                                                                                                                                                                 -SerProGlyGlyGlyGlyArgTyrSerAspThrProSerHi
                                                                                                                                                                                                                                                             eSerSerValSerThrGlyLeuHi
                                                                                                                                                                                                                                                                                                                                                               and Nucleic
                                                                                                                                                                                                     ProArgAspLeuSerThrSerAspThrCysValGluHisSerHisSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1286
199
43
95
58
                                                                                                                                                                                                                                                                                                       1162
                                                                                                                                                                                                                                                                                         405
                                                                                                                                                                                                                                                                                        Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (1-1286)
                                                                                                                                                                                                                                                                                                                                Sequence 56, Application US/09746491

Sequence 56, Application US/09746491

GENERAL INFORMATION:

APPLICANT: Burgess, Catherine E.

TITLE OF INVENTION: NO. US20020137202A1e1 Pr.

FILE REFERENCE: 15966-621

CURRENT APPLICATION NUMBER: US/09/746,491

CURRENT APPLICATION NUMBER: USSN 60/171,329

PRIOR APPLICATION NUMBER: USSN 60/171,329

PRIOR FILING DATE: 1999-12-21

NUMBER OF SEQ ID NOS: 72

SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                ||||||||||
TGCTCCTGCACCTGCTACCGCTCGCAGGAC--
                                                                                                                                                                                                                                                             LeuCysSerGlyThrGlnArgSerAlail
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          x US-09-746-491-56
                                                                                                                        ATCGAGGAGATCTCACCAAGC-
                                                                                                  CTCGCCGGAAACCGCAAC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.67e-87
850.50
61.89%
50.90%
40.40%
                                                                                                                                                                                                                                                                                                                                                                                                                                             sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (1-405)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similari
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: HOMO
-09-746-491-56
                                                                                                                                                                                                                                                                                                                                                                                                                       NO 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores
                                                                                                                                                                                                                                                                                                                           US-09-746-491-56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-939-483-5
                                                                                                                                                                                                                                              1040
                                          710
              650
                                                                      770
                                                                                    261
                                                                                                  830
                                                                                                                                                                                                                                                                           1064
201
                            221
                                                        241
                                                                                                                281
                                                                                                                              869
                                                                                                                                            301
                                                                                                                                                                         321
                                                                                                                                                                                       929
                                                                                                                                                                                                                  980
                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
                                                                                                                                                           893
                                                                                                                                                                                                      341
                                                                                                                                                                                                                                                             373
                                                                                                                                                                                                                                 357
                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No.:
                                                                                                                                                                                                                                                                                                                     RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred
                                         원
                                                                     뎡
                                                                                                  d
                                                                                                                              8
                                                                                                                                                          a
a
                                                                                                                                                                                                                                               a
a
                                                                                                                                                                                                                                                                           <del>a</del>
                                                                                                                                                                                      d
                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                      d
                            ઠે
                                                       ठे
                                                                                   ð
                                                                                                                                                                                                                                 ઠ
                                                                                                                                            ð
                                                                                                                                                                                                     δ
                                                                                                                ઠે
                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                         ઠે
```

736

241

796

55

56

916

268

975

93

310

Θ

376

316

101

196

ហ

496

436

556

161

919

Н

```
08:00:39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ch completed: September 16, time: 2225 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GlyserGlyPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Val
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1213
                                                                                                                                   677
                                                                                                                                                                                                                                                                                                                                                                                                                                                917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         916
                        182
                                                                                                  202
                                                                                                                                                                                                                737
                                                                                                                                                                                                                                                                                            797
                                                                                                                                                                                                                                                                                                                                256
                                                                                                                                                                                                                                                                                                                                                                      857
                                                                                                                                                                                                                                                                                                                                                                                                           269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Search
Job tim
                                                      ద
                                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                                                                                                          DP
                                                                                                                                    名
                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                        엄
                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       원
                                                                                                                                                                 8
                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                          Same
                                                                                                                                                                                                                                                                         Encoding
                                            1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           161
       32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81
                                         CCTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PheGlnSerLeuGlyGluArgIleAsnThrPheValArgTyrLeuLeuHisArgAlaLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SerPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |||||||:::|||
rectecctedectedeacetecetecetecaceaaaaacctegetegecceeecte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ValSerCysIleSerThrLeuCysIleGlyAlaAlaAlaPheSerTyrTyrGluArgTrp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ValPheAspAlaLeuGluSerGluProGluMetIleGluArgGlnArgLeuGluLeuArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SerMetAlaAsnMetValLeuIleGlyPhe
                                                                                                                                                                                                                                                                          Acids
         Arg
TyrAlaGluValLeuHisPheGlnSerMetCysSerCysLeuTrpTyrLysSer | YrAlaGluValLeuHisPheGlnSerMetCysSer | Yralam | Yrangallam | Yrang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GlnLeuGluLeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ValValLeuArgLeuLysProHisLysAlaGlyValGlnTrpArgPheAlaGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AsnValArgThrLeuAlaLeuIleValCysThrPheThrTyrLeuLeuValGl
                                                                                                                                                                                                                                                                          and Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1286
199
43
95
58
                                                                                                                                                                                                                                                                        Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative:
Mismatches:
Indels:
                                                                               338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               x US-09-746-491-57 (1-1286)
                                                                            Sequence 57, Application US/09746491

Patent No. US20020137202A1

GENERAL INFORMATION:

APPLICANT: Burgess, Catherine E.

TITLE OF INVENTION: No. US20020137202A1e1 Pr.

FILE REFERENCE: 15966-621

CURRENT APPLICATION NUMBER: US/09/746,491

CURRENT FILING DATE: 2000-12-20

PRIOR PPLICATION NUMBER: USSN 60/171,329

PRIOR FILING DATE: 1999-12-21

NUMBER OF SEQ ID NOS: 72

SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ArgGlyLeuGlyMetArgHisAlaGluVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.67e-87
850.50
61.89%
50.90%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-939-483-5 (1-405)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Homo
                                                                                                                                                                                                                                                                                                                                                                                                                        ID NO 57
ENGTH: 1286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scores
                                                                                                                                                                           -491-57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-746-491-57
                                        1155
                                                                                                                   213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         377
                                                                              330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment
Pred. No.:
Score:
                                                                                                                                                                        US-09-746
                                                                                                                                                        RESULT
                                       g
                                                                                                                   g
                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
    ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ठे
```

```
1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           310
                                                                              676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               303
                                                                                                                                                                                                                                            736
                                                                                                                                                                                                                                                                                                                                                                                                        796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93
PhevalTyrIleLeuThrGlyLeuThrValIleGlyAlaPheLeuAsnLeuValValLeu
||||:::|||||||||
|TCCTCTACATCCTCCTGGGGCTCACGGTCATTGGCGCCTTCCTCAACCTGGTGGTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AlaalaGlyGly------valGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGlyValGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -ThrHisAsnGlyGlnAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -ArgAsnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAGGCGGT-CTTCTGCACGAGCAAGTTTCTCATTACTGTCTGTGGCT-AAGTCCCCTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TyralagluValLeuHisPheglnSerMetCysSerCysLeuTrpTyrLysSerArg--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    đ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          --ThrCysAlaAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GluHisArgAlaLeuLeu-
```

## 5.1.6 Compugen Ltd version -GenCore (c) 1993 Copyright

model SW using protein search, OM protein

3 ; Search time 40 Seconds
(without alignments)
974.195 Million cell updates/sec 2005, 22:47:23 15, September Run on:

.....STGLHSLAAFRGLMKRRSSV 1 ENVRTLALIVCTFTYLLVGA.... US-09-939-483-5 2105 score: Sequence: Title: Perfect

405

Gapext 0.5 BLOSUM62 Gapop 10.0 , Scoring table:

283416 segs, 96216763 residues Searched:

283416

of hits satisfying chosen parameters: Total number

length: 0 length: 2000000000 seq seq Minimum DB Maximum DB Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR Database

R\_79:\* pir1:\* pir2:\* pir3:\* 4 0 0 4 . . . . .

...

printed Pred. No. is the number of results predicted by chance to have score greater than or equal to the score of the result being prand is derived by analysis of the total score distribution. score gand is

	Descript	rotein	tas	rectifi	ical pr	pota	a)	al	hypothetical prote	al	cal	ı cha	ᅼ	_	cal	_	£22b7.7 protein -		d d	Ö	potassium channel	potassium channel	hypothetical prote	al	hypothetical prote	_	$^{\mathrm{chs}}$	othetical pro	J	hypothetical prote
SUMMARIES		C770	350	234	986	$\sim$	556	893	539	390	003	380	312	318	159	768	463	111	4353	503	4336	4336	2183	2622	2772	2426	4339	1558	T43394	275
		2	~	~	~	N	~	7	~	~	~	~	~	~	7	~	~	N	7	~	N	7	~	7	~	~	~	~	7	7
		330	3	C	334	364	3	513	σ	2	53	0	91	æ	4	N	m	ហ	9	g	4		$^{\circ}$	4,	-	Ö		325		769
de	Query		о С		თ	29.0	<u>.</u>	4	4	٠. س	m.	ო	ო	ς.	ά.	2	8	ά.	8	i	Ή.	Ή.	7	Ξ.	ä	۲,	<del>-</del> i	11.3	•	•
	Score	836.5	0		61	4	34.	•	03.	a)	□	76.		69.	S	S		S	S		ぜ	4	ぜ	ぜ	マ	•	マ	•	37.	(7)
	sult No.	- - - - - - - - -	7	ന	4	ß	9	7	œ	σ	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29

GDVRPRDPVTCAAAAGGVGVGVGGSGFR 308

281

ò

hypothetical prote	ø	hetical	hypothetical prote	netical	l pr	8	cal	cal pro	che c	ical	ica	ical	hypothetical prote	chetical	othetical
46	T24201	2695	T26616	T23700	2168	4352	16	1642	4335	1517	2226	N	T27364	2374	T26232
~	~	~	~	~	~	~	~	7	~	~	~	~	7	~	~
009	485	$\sim$	643	539	586	484	519	551	555	350	504	099	700	383	631
7	•	ö	ö	10.3	ė.	ö	ö	ö	ö	ö	ö	•	•	•	•
ä	Ť					_	2	'n	ហ	Ŋ		7.		95	
35.5 11.	.5	23.	21	216	Н	14.	•	14	14	13	10	9	9	ĭi	187

```
channel family with membrane K+ current
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ъ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  64
                                                                                                                                  09-Nov-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGIPLTLIM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FOSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYERW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 NVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGGYEELER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -CLSGSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
RESULT 1
JC7703
TASK-5 protein - human
C;Species: Home sapiens (man)
C;Date: 09-Nov-2001 #sequence_revision 09-Nov-2001 #text_change 09-Nov-C;Accession: JC7703
R;Kim, D.; Gnatenco, C.
Biochem. Biophys. Res. Commun. 284, 923-930, 2001
A;Title: TASK-5, a new member of the tandem-pore K+ channel family.
A;Accession: JC7703
A;Ac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----EHRALLTHNGQAVGLGGLS----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    39.7%; Score 836.5; DB 2;
llarity 54.6%; Pred. No. 1.1e-65;
Conservative 35; Mismatches 83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RFMTMNAEDEKRDA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   l Similarity
179; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
Matches 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
```

ir tra

four by it

171

240

231

297

291

51;

Match Local Similarity 47.8%; nes 175; Conservative 51

Query Ma Best Loc Matches

4

В

ò

19

ò

64

8

179

ò

181

S S

239

ð

d

299

ð

293

D

124

원

121

ò

310

Q

GFSPPSSP

305

```
15-Oct-1999 #text_change 18-Feb-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CESP: C40C9
                                                                                                                                         MFQSLGERINTFVRYLLHRAKRGLGMRH----AEVSMANMVL----IGFVSCISTLCIGA
                                                                                                                                                                                                                                                                                                                                                                                                                            AAAAGGVGVGVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCV
                                                                                                                                                                                                                GIPLTLIMFOSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         279/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hypothetical protein C40C9.1 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 18-;
C;Accession: T19860
R;Hembry, C.
submitted to the EMBL Data Library, March 1996
A;Reference number: Z19188
A;Accession: T19860
A;Reference number: Z19188
A;Accession: T19860
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-334 <WIL>
A;Residues: 1-334 <WIL>
A;Cross-references: EMBL: Z70266; PIDN: CAA94204.1; GSPDB:GN00028; CE;Genetics:
A;Experimental source: clone C40C9
C;Genetics:
A;Gene: CESP: C40C9.1
A;Map position: X
A;Introns: 34/1; 60/2; 98/1; 145/3; 160/3; 181/1; 204/1; 252/2; 279,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12;
     336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GSPDB:GN00028;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 334
     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           78;
Score 788.5; DB 2;
Pred. No. 1.9e-61;
49; Mismatches 81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29.0%; Score 611; DB 2; larity 47.7%; Pred. No. 7.1e-46; Conservative 45; Mismatches 78
ch 37.5%;
1 Similarity 47.7%;
178; Conservative 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EH---SHSSPGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RHRHRKHTEPHGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 123; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ÀS-
 Query Match
Best Local S
Matches 178
                                                                                                                                             54
                                                                                                                                                                                                                                                                                                                                                                                                                                                               298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                  124
                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            183
                                                                                                                                                                                                                                                                                                                                                         232
                                                                                                                                                                                                                                                                                                                                                                                                                             292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       127
                                                                                                                                          8
                                                                                                                                                                            셤
                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Бþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ਠੋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CESP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     :GN00020;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   310
                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              elegans
                                                                                                                                                                                                                                                                                                                                                                                                       GVGVGGSGFRNVYAEVLHFQSMCSCLWYKSREKLQYSIPMIIPRDLSTSDTCVEH---SH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGIPLTLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IGAFLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ativksvphkagyqwkfsgafyfattvittigyghstpmtdagkvfcmlyalagiplgli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAAFSYY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ISAAMNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WULRFMIMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDPVTCAAAAGGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -DEKLRHRKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AFMFSSY
                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GSPDB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12
                                            RESULT 2
T43509
probable potassium channel chain n2P38 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 21-Jan-2000 #sequence_revision 21-Jan-2000 #text_change 09-J.
C;Accession: T43509
R;Wang, Z.W.; Salkoff, L.
submitted to the EMBL Data Library, August 1998
A;Description: Potassium channels in C. elegans.
A;Reference number: Z22450
A;Accession: T43509
A;Accession: T43509
A;Accession: J230 < WANA
A;Residues: 1-329 < WANA
A;Residues: 1-329 < WANA
A;Cross-references: UNIPROT:017185; EMBL:AF083652; PIDN:AAC32863.1
                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCI--G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Caenorhabditis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     :AF025454; PIDN:AAC71151.1; ; clone F34D6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             change 09
                                                                                                                                                                                                                                                                                                                                       Length 329;
                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         102/1; 136/1; 180/1; 207/1; 265/2; 296/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #text_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ther 1997
cosmid F34D6
                                                                                                                                                                                                                                                                                                                                  Score 800; DB 2; I Pred. No. 1.8e-62; 1; Mismatches 82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Outward rectifier potassium channel homolog twk-23 - C (Species: Caenorhabditis elegans C;Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #te C;Accession: T32347

R;Murray, J.; Wohldmann, P.; O'Neal, D.

R;Matus: T32347

A;Reference number: Z21153

A;Residues: T32347

A;Residues: 1-336 <MUR>
A;Residues: 1-336 <MUR>
A;Residues: 1-336 <MUR>
A;Experimental source: strain Bristol N2; clone F34D6 C;Genetics:
A;Gene: twk-23; CESP:F34D6.3

A;Map position: 2

A;Introns: 44/3; 102/1; 136/1; 180/1; 207/1; 265/2; 29
GVVRGGQAPR
```

ന

306/

316

TEPHGG

311

8

361

SSPGGG

356

ò

9

126

172

182

242

us-09-939-483-5.rpr

Qy 117 LTLIMFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCISTLCIGAAA 174		brary, July 1996 f C. elegans cosmid C52B9. ated from GB/EMBL/DDBJ	rences: EMBL:U64598; FIDN:AAC4/9/6.1; GSFDB:GNUUUZ al source: strain Bristol N2; clone C52B9 :C52B9.6 on: X 2/3; 54/3; 90/3; 158/1; 173/1; 227/3; 299/3; 346/2	Query Match 14.5%; Score 305.5; DB 2; Length 513; Best Local Similarity 25.5%; Pred. No. 7.9e-19; Matches 94; Conservative 56; Mismatches 104; Indels 115; Gaps 12;  Qy 6 LALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGGYEELERVVLR 65 :  :         :         :     : : :       : : :         :	Qy         66 LGYGHAA 97	Oy 144L  Db 238 QYRSQSQSRSSSVM  Oy 169 CIGAAAFSYYERWT	Db 344 LSLATMCIDLAGTEYIRKIHYLGTKMEDAKGAVMTGLQAGEHLLKHTGIEVIKT 397  Qy 276 LSGSLGDVR 284
Qy       233 GAFLNLVVLRFMTMNAED 250           :	RESULT 5 T43361 probable potassium channel chain n2P20 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 11-Jan-2000 #sequence_revision 11-Jan-2000 #text_change 09-Jul-2004 C;Accession: T43361 R;Wang, Z.W.; Salkoff, L. R;Wang, Z.W.; Salkoff, L. R;Wang, Z.W.; Salkoff, L. R;Wang, Z.W.; Calkoff, C. elegans. A;Description: Potassium channels in C. elegans. A;Accession: T43361 A;Status: preliminary; translated from GB/EMBL/DDBJ A;Cross: preliminary; translated from GB/EMBL,DDBJ A;Residues: 1-364 <wan> A;Residues: 1-364 <wan> A;Cross-references: UNIPROT:076790; EMBL:AF083646; PIDN:AAC32857.1</wan></wan>	Match Local Similarity 47.7%; Pred. No. 7.9e-46; Local Similarity 47.7%; Pred. No. 7.9e-46; Les 123; Conservative 45; Mismatches 78; Indels  1 ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYN:   :	61 RVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGIPLTLI :::	Db 127 MFQSIGERVNTFIAYSLHKFRDSLHQQGFTCLQEVTPTHLLMVSLTIGFMVIVSGT 182  OY 173 AAFSYYERWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVI 232  OY 183 YMFHTIEKWSIFDAYYFCMITFSTIGFGDLVPLQQVNALQDQPLYVFATIMFILIGLAVF 242  OY 233 GAFLNLVVLRFMTMNAED 250  OY 183 CAFLNLVVLRFMTMNAED 250	Db 243 SACVNLLVLGFMASNADE 260  RESULT 6  S65566 inward rectifier potassium channel TWIK-1 - human C;Species: Homo sapiens (man) C;Date: 28-Oct-1996 #sequence revision 13-Mar-1997 #text change 09-Jul-2004	<pre>first = first form first for</pre>	at Match  15.9%; Score 334.5; DB 2; Length 336;  15.9%; Pred. No. 1.4e-21;  15.9%; Pred. No. 1.4e-21;  16.00 Servative 47; Mismatches 109; Indels 39; Gaps 11;  17.00 Servative 47; Mismatches 109; Indels 39; Gaps 11;  18.10 Servative 47; Mismatches 109; Indels 39; Gaps 11;  18.10 Servative 47; Mismatches 109; Indels 39; Gaps 11;  18.10 Servative 47; Mismatches 109; Indels 39; Gaps 11;  26.10 Servative 47; Mismatches 109; Indels 39; Gaps 11;  26.10 Servative 47; Mismatches 109; Indels 39; Gaps 11;  26.10 Servative 47; Mismatches 109; Indels 116  27.10 Servative 47; Mismatches 109; Indels 116  28.11 Servative 47; Mismatches 109; Indels 116  29.11 Servative 47; Mismatches 109; Indels 116  20.11 Servative 47; Mismatches 109; Indels 116  20.11 Servative 47; Mismatches 109; Indels 116  20.11 Servative 47; Mismatches 109; Indels 39; Gaps 11;  20.11 Servative 47; Mismatches 109; Indels 39; Gaps 11;  20.11 Servative 47; Mismatches 109; Indels 39; Gaps 11;  20.11 Servative 47; Mismatches 109; Indels 39; Gaps 11;  21.11 Servative 47; Mismatches 109; Indels 39; Gaps 11;  22.11 Servative 47; Mismatches 109; Indels 39; Gaps 11;  23.12 Servative 47; Mismatches 109; Indels 39; Gaps 11;  24.12 Servative 47; Mismatches 109; Indels 39; Gaps 11;  25.12 Servative 47; Mismatches 109; Indels 39; Gaps 11;  26.12 Servative 47; Mismatches 109; Indels 39; Gaps 11;  27.12 Servative 47; Mismatches 11;  28.11 Servative 47; Mismatches 11;  29.12 Servative 47; Mismatches 11;  20.13 Servative 47; Mismatches 11;  20.13 Servative 47; Mismatches 11;  20.13 Servative 47; Mismatches 11;  20.14 Servative 47; Mismatches 11;  21.14 Servative 47; Mismatches 11;  22.15 Servative 47; Mismatches 11;  23.15 Servative 47; Mismatches 11;  24.15 Servative 47; Mismatches 11;  25 Servative 47; Mismatches 11;  26 Servative 47; Mismatches 11;  27 Servative 47; Mismatches 11;  28 Servative 47; Mismatches 11;  29 Servative 47; Mismatches 11;  20 Servative 47; Mismatches 11;  20 Servative 47; Mismatches 11;  21 Servative 47; Mismatches 11;  21 Servative 47; Mismatche

S

3

-48

Q

93

-09

4

Pag(

```
983/2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     hypothetical protein F20Al.7 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 09-Jul-2004
C;Accession: T30037
R;Gattung, S.; Wu, X.
submitted to the EMBL Data Library, March 1996
A;Description: The sequence of C. elegans cosmid F20Al.
A;Reference number: Z20726
A;Reference number: Z20726
A;Accession: T30037
A;Reference number: Z20726
A;Accession: T30037
A;Reference number: J20726
A;Molecule type: DNA
A;Residues: 1-1539 cGAT>
A;Cestius: preliminary; translated from GB/EMBL/DDBJ
A;Cession: T30037
A;Experimental source: strain Bristol N2; clone F20Al
C;Genetics:
A;Gene: CESP:F20Al.7
A;Map position: 5
A;Introns: 19/3; 41/2; 71/2; 110/3; 135/2; 190/1; 246/1; 287/3; 491/3; 598/2; 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GSPDB:GN00023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             378
                                                       138
                                                                                                                                                          257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   206
                                                                                                                          150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        598/2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           - KLLTEYMEAVKSGDP
: | : | : | : | : | : | TFDNISEINDGSEGGENENEGEEEEQIQFDPSNHEKRVSVLFILLIMLGYVAG-----G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 --WRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EERWKHAILKFE-EDIGLEEPVIETVWTFWMSFLYAGTIFTTIGYGNIACKTRAGQIATM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -VLIGEVSCISTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LTVIGAFLNLVVLRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPRDP
                                                                         || |:| :||||||||| |: :| : | : | | RTDEGRVAIIFYALLGIPLILVTIADIGRFLATYIIKLHHGYMAVMSFVTNSCLKCIKWA
                                                                                                                                                           CCWIRLPRRHIPMPTLELLQRTQKLYPNNNNPTVAATAASAGGGTGRKKKQQRDNVSDAG
                                                                                                                                                                                             -MVLIGFVSCISTLCIG
                                                                                                                                                                                                                                                                 AAAFSYYERWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTV
                                                                                                                                                                                                                                                                                   --WLPATLAYIVFGLII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TLALIVCTFTYLLVGAAVFDALESEPEMIERQ------RLELRQLELRA-RYNLSEGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TFKLLIIIGLYSFIGAHIFMYLEVPTDLEAREDGFHQRKIAREVMVLNLRAIFYDNREDR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | |: | | : : : : | | : : : : : | KLAKTMKRWKLSKHGAPSSIAISNSEENRLNSTPEDDEEEEEIHQDPPVLSTLIATVAWI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           116;
                                                                                                                          -RAKRGLGMRHAE-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1539
                                                                                                                                                                                                                                                                                                                                     271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                        || || || |-
--RDIHFYGRSLGRQFMTIGGKVVHLG
                                                                                                                                                                                                                                                                                                                                     ---RALLTHNGQAVGLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GERI-
                                                       PLTLIMFOSLGERINTFVRYLLH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13.4%; Score 282; DB 2; 1 larity 24.4%; Pred. No. 3.4e-16; Conservative 63; Mismatches 124;
                                                                                                                                                                                                                                                                                  -QEKLAQMYMALLQ-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ---NTFVRYLL--HRAKRGLGMRHAEVSMANM-
                                                                                                                                                                                                                                                                                                                                     IGAFLNLVVLRFMTMNAEDEKRDAEH---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 56 YEELERVVLRLKPHKAGVQ----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FYALLGIPLTLIMFQSL-
                                                       STDGGKVFCMFYALLGI
                                                                                                                                                                                                                                                                                                                                                          ::||
TTMCIDLVGSEYI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LSMLTVCIDVL
                                                                                                                                                                                              --VSMAN--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 98; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  379
                                                                                                                                                                                                                                                                                                                                      232
                                                                                                                                                                                                                                                                                                                                                                      364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               327
                                                                                                                                                            198
                                                                                                                                                                                                                               258
                                                                                                                                                                                                                                                                 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           267
                                                                                                                                                                                             151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              d
                                                                                        g
                                                                                                                                                         d
                                                                                                                                                                                                                              ద
                                                                                                                                                                                                                                                                                                  d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <del>Q</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         d
                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                       ਠੇ
                                                                                                                          ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                           CESP: TZ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CESP: R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PDB:GN00023;
                                                                                                                                         PDB:GN00021;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10;
                                                                                                                                                                                                                                                                                                   σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ul-2004
                                                                                                                                                                                                                                                                                                                                                                                                 --ELRARY--NLSEGGYEELERVVLRLKPHKAG-----VQWRFAGSFYFAITVITTIGYG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             75 VEDLAVKYVDNVTRILFEAFDTHCIGAKHLRPGGEDEDYNWTYMTALFFTTTLLTTIGYG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -GLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYERWTFFQAYYYCF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   --RLKPH----KAGVQWRFAGSFYFAITVITTIGYGHAAP
                                                                                                                                                                                                                                                                                                                                                                    GIGQHV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ISSKDDKNKEGDLNLDHLENYISIPIFLIVAILLSYITFGAVVLSMWEGWDFFSGFYFSF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ITLTTIGFGDYVALQKDQALQTQPQYVAFSFVYILTGLTVIGAFLNLVVLRFMTMNAEDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAYSTWR
                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     --LSCLSGSLGDVRPRDPVTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SS
                                                                                                                                           ဗ္ဗ
                                                                                                                                                                                                                                                                                                                                                        79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ---RINTFVRYLLHRAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ---EYYILDLCYIIIGLSITTMCIDLVGIQYI-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     48
                                                                                                                                                                                                                                                                 393;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #text_change 09
                                                                A; Accession: T25392
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-393 <WIL>
A; Residues: 1-393 <WIL>
A; Experimental source: clone T28A8
C; Genetics:
A; Gene: CESP:T28A8.1
A; Map position: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL: Z74475; PIDN: CAA98957.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83/2; 131/1; 170/1; 261/1; 306/1; 338/1; 369/1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 524;
                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                   6 LALIVCTFTYLLVGAAVFDALESEPEM-----IERORLELROL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8 LIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARY-
                                                                                                                                                                                                                               310/3; 364/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Reference number: Z19816
A; Accession: T23907
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-524 <WIL>
A; Cross-references: UNIPROT: Q21729; EMBL: Z74475; PIDN: A; Experimental source: clone R04F11
C; Genetics:
A; Genetics:
A; Genetics:
A; Genetics:
A; Genetics:
A; Genetics:
A; Hatrons: 35/3; 83/2; 131/1; 170/1; 261/1; 306/1; 338
                                                                                                                                                                                                                                                             14.4%; Score 303.5; DB 2; larity 24.9%; Pred. No. 8.6e-19; Conservative 60; Mismatches 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13.7%; Score 289; DB 2;
larity 23.2%; Pred. No. 2.3e-17;
Conservative 45; Mismatches 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hypothetical protein R04F11.4 - Caenorhabditis eleg
C; Species: Caenorhabditis elegans
C; Date: 15-Oct-1999 #sequence_revision 15-Oct-1999
C; Accession: T23907
R; Harris, B.
submitted to the EMBL Data Library, June 1996
A; Reference number: Z19816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HAAPSTDGGKVFCMFYALLGIPLTLIMFQSLGE---
                                  submitted to the EMBL Data Library, March 1997
A, Reference number: Z20027
                                                                                                                                                                                                                              73/1; 112/3; 179/2; 209/3; 287/2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KRDAEHRALLTHNGQAVGLGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ITMTTVGFGDIVPLKR-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50 NLSEGGYEELERVVL----
                                                                                                                                                                                                                                                                                l Similarity
88; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity 94; Conser
 C; Accession: T25392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 94
                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 88
                                                                                                                                                                                                                                                                                                                                                                                                        44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                143
                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
```

유

8

ð

ઠે

ŕ

8

1106

CESP: F2(

```
GSPDB:GN00023; CESP:K0
                 а
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>ن</u>
..
                                                                                   248
                                                                                                                                                     308
                                                                                                                                                                                                                        368
                                                                                                                                                                                                                                                                                                                                                            488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       200
                                                                                                                                                                                                                                                                                                                           201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hypothetical protein KO1D12.4 - Caenorhabditis elegans
C; Species: Caenorhabditis elegans
C; Species: Caenorhabditis elegans
C; Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 09-Jul-2004
C; Accession: T23182
R; Dobson, R.
R; Data Library, June 1996
A; Reference number: Z19703
A; Reference number: Z19703
A; Reference number: Z19703
A; Reference number: Z19703
A; Residues: 1-383 < WILL>
A; Residues: 1-383 < WILL>
A; Cross-references: UNIPROT: Q21094; EMBL: Z75543; PIDN: CAA99871.1; GSPDB: GNO(C; Genetics:
                                                                                                                                       | | | | ::|: ::
249 INNNEKEVWKEDIEKELMLYSEKLYKAFKEQYVRYSDVRTIGFEGRSSYEBADETGGDSE
                                                                                                                                                                                                         EELERVVLRLKPHKAGV-----QWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PIAIITIGDLGKFLSECTIWLYKHMRKGSARLDSAWKRFRGLEDSISDDLESASKNODSS
                                                                                                                                                                                                                                                                                                                           -LGMRHAEVSMANM-VLIGFVSCISTLCIGAAAFSYYERWTFFQAYYYCFITLTTIGFGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ENVRTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARY----NLSEGGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ::| :: | !|: | : |: | WGCTCCVLPFNLFLERLVTGMSYILRSLRERKIRYRLKESGNKPVTLLLNNEDFNESSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DYVSNQQDVTRMSPDLYRFVNFCLLTLGACFFYCLSNVSSIVVRQLLNWMIKK-MDVKVE
                                                                                                                                                                                       -VOWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCMFYALLGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   --GLGMRHAEVSMANMVLIGFVSCISTLCIGAAAFSYYERWTFFQAYYYCFITLTTIGFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -VAFSFVYILTGLT--VIGAFLNLVVLRFMTMNAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                    -LIVCTFTYLLVGAAVFDALES--BPEMIERQRLELRQLELRARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                             YVALQKDQALQTQPQYVAFSFVYILTGLTVIGAFLNLVVLRFM 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         --EKRDAEHRALLTHNGQAVGLGGLSCLSGSLGDVRPR
                                                                                                                                                                                                                                                                                                                                                                                                               -YIAIMLIYLGVGLSVTTMCIDLAGIQYI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ---HRAKR--
Pred. No. 2.5e-15;
; Mismatches 104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12.8%; Score 269.5; DB 2; 25.9%; Pred. No. 8.1e-16; ive 57; Mismatches 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           76/3; 184/2; 217/2; 270/2; 295/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LLGI PLTLIMFQSLGERINTFVRYLL-----
                                                                                                                                                                                                                                                        PLTLIMFOSLGERINTFVRYLLHRAKRG--
                53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DYVALOKDOALOTOPOY---
                                                                                                                     ---NLSEGGYEELERVVL-
 larity 23.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 89; Conser
Similarity 79; Conser
                                                                                                                                                                                       RLKPHKAG-
                                                  ENVRTLA-
                                                                                                                                                                                                                                                                                                                                                                                                                               IVPENHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CESP: K01D12.4 sition: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Gene: CESP: K01E
A; Map position: 5
A; Introns: 28/3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             င်္ခ
                                                                                                                                                                                                                        309
                                                                                                                     50
                                                                                                                                                                                                                                                                                          369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       278
                                                                                   189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                57
                                                                                                                                                                                                                                                                                                                                                           429
                                                                                                                                                                                                                                                                                                                                                                                             202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7
                                                    Н
                                                                                                                                                                                       65
                                                                                                                                                                                                                                                        116
                                                                                                                                                                                                                                                                                                                           144
                                                                                                                                                                                                                                                                                                                                                                                                                               489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       143
 Best Local
                                                                                  <del>a</del>
                                                                                                                                                     g
                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                     ઠે
                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                           g3808068; PIDN:AAC692
                                                                                                                                                                                                                       from Dros
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /C_e1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CESP: T12C9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ac.uk/Projects/C
283, 2103, 1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ά
,
                                                                                                                                                                                                                      cloned
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GN00020;
                                                                                                                                                     Jul -2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 May-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CIST-LCIGAAAFSYYERWTFFQAYYYCFITLTTIGFGDYV-ALQKDQALQTQPQYVAFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -VLRLKP--HKAGVQWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFCM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KNTTTQD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FYALLGIPLTLIMFQSLGERIN----TFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                        lains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein T12C9.3 [imported] - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 10-May-2001 #sequence_revision 10-May-2001 #text_change 10-May-C;Date: 10-May-2001 #sequence_revision 10-May-2001 #text_change 10-May-C;Date: 10-May-2001 #the C. elegans Sequencing Consortium.
Science 282, 2012-2018, 1998
A;Title: Genome sequence of the nematode C. elegans: a platform for inv.
A;Reference number: A75000; MUID: 99069613; PMID: 9851916
A;Note: published errata appeared in Science 283, 35, 1999; Science 283, A;Note: preliminary
A;Molecule type: DNA
A;Residues: 1-1910 <STO>
A;Coss-references: GB:chr_II; PIDN:AC71141.1; PID:g1086770; GSPDB:GN00(A;Note: proline-rich
C;Genetics:
A;Gene: T12C9.3
A;Map position: 2
                                                                            potassium channel protein - fruit fly (Drosophila melanogaster)
C; Species: Drosophila melanogaster
C; Date: 13-Aug-1999 #sequence_revision 13-Aug-1999 #text_change 09-0.
C; Accession: T13807
R; Goldstein, S.A.; Price, L.A.; Rosenthal, D.N.; Pausch, M.H.
Proc. Natl. Acad. Sci. U.S.A. 93, 13256-13261, 1996
A; Title: ORK1, a potassium-selective leak channel with two pore dome A; Reference number: Z17770; MUID: 97075152; PMID: 8917578
A; Accession: T13807
A; Residues: T13807
A; Residues: 1-1001 <GOL>
A; Residues: 1-1001 <GOL>
A; Cross-references: UNIPROT: Q94526; EMBL: U55321; NID: 9380867; PID: G; Genetics:
A; Gene: ORK1
A; Map position: 1
                                                                                                                                                                                                                                                                                                                           PID:
                                                                                                                                                                                                                        dom
                                                                                                                                                                                                                                                                                                                                                                                                                               1001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RWILLLIFYISYLMFGAAIYYHIEHGEEKISRAEQRKAQIAIN-EYLLEELGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1910;
                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 RTLALIVCTFTYLLVGAAVFDALESEPEMIERQRLELRQLELRARYNLSEGG
                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
 -- RNVYAEVL-HFQSMCS
                  2
                                                                                                                                                                                                                                                                                                                                                                                                                             ore 276.5; DB 2; ed. No. 6.2e-16; Mismatches 113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           273.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FVYILTGLTVIGAFLNLVVLRFMTMNAEDEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |: : | ::: |: :|
IFVIVWFIFSLGYL--VMIMTFITRGLQSKK
                                                                                                                                                                                                                                                                                                                                                                                                                              Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                             90;
                                                                                                                                                                                                                                                                                                                                                                                                                           13.1%;
ilarity 26.9%;
Conservative 6
VTCAAAAGGVGVGVGGSGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
hes 73; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EELERV---
                                  418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109
289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          222
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query
                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <del>අ</del>
ਠੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
```

ð

12

Gaps

96;

Indels

Length 427

167

222

303

352

--LHPVGTVEYMLCSI

282

373

-DASBSA--

329

414

23:01:56

107

-QWRFAGSFYFAITVITTIGYGHAAPSTDGGKVFC

```
MFYALLGI PLTLIMFQSLGERINTFVRYLLHRAKRGLGMRHAEVSMANMVLIGFVSCIST
                                                                                                                                                                                                                                LCIGAAAFSYYE-RWTFFQAYYYCFITLTTIGFGDYVALQKDQALQTQP----QYVAFSF
                                                                                                                                                                                                                                                                                                                                                      VYILTGLTVIGAFLNLVVLRFMTMNAEDEKRDAEHRALLTHNGQAVGLGGLSCLSGSLGD
                                                                      LALIVCTFTYLLVGAAVFDALESEPEMIERQRLE-LRQLELRARYNLSEGGYEELERVV-
                                                                                                                                                                                                                                                                                                                                                                                                                                               -IAKWESIGRGFDAMKMLNALRKKETVKKFQIMLELMGYSSK
                                                                                                                                                                                                                                                                                                                                                                                                                          VRPRDPVTCAAAAGGVGVGVGGSGFRNVYAE---VLHFQSMCSCLWYKSR
Score 262; DB 2; I
Pred. No. 4.2e-15;
i; Mismatches 119;
                                                                                                                                                                                                                                                                                                  --ILTTLAVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2005,
                                     51;
 12.4%;
larity 24.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Search completed: September 15, Job time: 43 secs
                                                                                                                                          ----LRLKPHKAGV-
Query Match
Best Local Similarity
Matches 84; Conser
                                                                                                                                                                                                                                                                                                                                                                                        VFIFIGE
                                                                                                                                                                                                              108
                                                                                                                                                                                                                                                255
                                                                                                                                                                                                                                                                                   168
                                                                                                       135
                                                                                                                                                                            195
                                                                                                                                                                                                                                                                                                                   304
                                                                                                                                          64
                                                                                                                                                                                                                                                                                                                                                        223
                                                                                                                                                                                                                                                                                                                                                                                         353
                                                                                                                                                                                                                                                                                                                                                                                                                          283
                                                                                                                                                                          d
                                                                                                                                                                                                                                              <del>Q</del>
                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                       셤
                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CESP: ZK
                                                                                                                                                                                                                                                                                                    CESP: F
                                                                                                                                                                                                                                                                                                   GSPDB: GN00023;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GSPDB:GN00020;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                75
                                                                                                                                         Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |: | :|
YFFFTSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -GGYEELERVVLRLKPHKAGVQWRFAGSFYFAITVITTIGYGHA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MNAEDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               --PSSPRLLITMFGFILVGLSLVSMVINLLQAKMKSTYEAGRNDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   76 IKGNTSQRLTTFFIEELGSYEN----QLGVKWSQQKMDWDFWNAVLFAGTICTTIGYGHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        --RHAEVSMANMVL-IGFVSCISTLCIGAAAFSYYE-RWTFFQAYYYCFITL
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              --EMIERORLELROLELRARYNLSE--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | | :: | | : | : | : | : | EMKEIERQERH-DLDIFDLPLPVGIALIVTWIFICSFVLSVWDHNWTLLESFY
                                                                                                                                          change 09-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             change 09-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                            16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APSTDGGKVFCMFYALLGIPLTLIMFQSLGERINTFVRYLLHRAKRGLGM--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TŢIĢFĢDYVALQKDQALQTQPQYVAFSFVYĮĻTĢĻTVIGAFLŅĻVVLRFMT-
                                                                                                                                                                                                                                                                                                UNIPROT:045422; EMBL:Z92832; PIDN:CAB07375.1; ce: clone F31D4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PIDN:CAA93881.1;
                                                                                                                                                                                                                                                                                                                                                                                                                          443;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           414/3
                   380
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hypothetical protein ZK1067.5 - Caenorhabditis elegans
C; Species: Caenorhabditis elegans
C; Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_char
C; Accession: T27681
R; Thomas, K.
submitted to the EMBL Data Library, March 1996
A; Reference number: Z20404
A; Reference number: Z20404
A; Reference number: Z20404
A; Reference number: Z20404
A; Residues: 1-27681
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-427 < WIL>
A; Residues: 1-427 < WIL>
A; Cross-references: UNIPROT: Q23386; EMBL: Z70038; PIDN: CAA938
A; Experimental source: clone ZK1067
C; Genetics:
A; Genetics:
A; Genetics:
A; Gene: CESP: ZK1067.5
A; Map position: 2
A; Introns: 51/3; 123/1; 212/1; 261/2; 331/3; 365/1; 394/2; 4
                                                                                                                                                                                                                                                                                                                                                                                                                            Length
  337 DRSFLCFKKKRRYMGLGLRPPKGISNLLAGDNCCIEHLNVFRIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           123/1; 212/1; 261/2; 331/3; 365/1; 394/2;
                                                                                                                                         #text
                                                                                            hypothetical protein F31D4.7 - Caenorhabditis elegans C; Species: Caenorhabditis elegans C; Species: Caenorhabditis elegans C; Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #te: C; Accession: T21598
R; Mortimore, B.
submitted to the EMBL Data Library, March 1997
A; Reference number: Z19447
A; Reference number: Z19447
A; Reference number: Z19447
A; Reference number: Z19447
A; Residues: 1-443 < WIL>
A; Residues: 1-443 < WIL>
A; Residues: 1-443 < WIL>
A; Cross-references: UNIPROT: O45422; EMBL: Z92832; PIDN: A; Experimental source: clone F31D4
C; Genetics:
A; Genetics:
A; Genetics:
A; Hatrons: 13/3; 90/2; 149/1; 222/3; 290/3
                                                                                                                                                                                                                                                                                                                                                                                                                     Score 266; DB 2; I
Pred. No. 1.9e-15;
5; Mismatches 113;
                                                                                                       elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8 LIVCTFTYLLVGAAVFDALESEP---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KRDAEHRALLTHNGQAVGLGGLSCLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -SIGVLOCFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                         55;
                                                                                                                                                                                                                                                                                                                                                                                                                        12.6%;
llarity 25.2%;
Conservative 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ктрнінотірт-
                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 82; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                :|:| || |
STVGLGDLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         T27681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ठ
```

```
5.1.6
Compugen Ltd
version - 2005
GenCore
(c) 1993
       Copyright
```

using frame\_plus\_p2n model nucleic search, OM protein

Seconds 06:00:08 2005, 16, September Run on:

tes/sec upda (without alignments) 3668.736 Million cell

Title: Perfect so Sequence:

.. STGLHSLAAFRGLMKRRSSV US-09-939-483-5 2105 1 ENVRTLALIVCTFTYLLVGA..... score:

405

table Scoring

0.5 0.5 7.0 Xgapext Ygapext Fgapext Delext BLOSUM62 Xgapop 10.0 , Ygapop 10.0 , Fgapop 6.0 , Delop 6.0 ,

68479088 of hits satisfying chosen parameters: Total number

34239544 segs, 19032134700

Searched:

residues

2000000000 length: length: sed sed 88 Minimum Maximum

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Command line parameters:
-MODEL=frame+ p2n.model -DEV=xlh
-Q=/Cgn2 1/USPTO\_gpool/US0939483/runat 15092005 111400 9726/app\_query.fasta\_1.583
-Q=/Cgn2 1/USPTO\_gpool/US0939483/runat 15092005 111400 9726/app\_query.fasta\_1.583
-DB=EST \_QFMT=fastap -SUFFIX=rst -MINMATCH=0.1 -TOOPCL=0 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DOCALIGN=200 -THR\_SCORE=pct -THR\_MAX=100 -THR\_MIN=0 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPSIZE=50 -MINLEN=0 -MAXLEN=200000000
-USER=US09939483 @CGN 1 1 4352 @runat 15092005 111400 9726 -NCPU=6 -ICPU=3
-NO MMAP -LARGEQUERY -NEG\_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV\_TIMEOUT=120 -WARN\_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7

Database

gb\_est1:\*
gb\_htc:\*
gb\_est3:\*
gb\_est4:\*
gb\_est5:\*
gb\_est6:\*
gb\_gss1:\* EST: \* 

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

			cri	AY411659 Mus muscu	BC032047 Mus muscu	AY411657 Homo sapi	BX359243 BX359243	AY411658 Pan trogl	BI412471 602985964	CK602460 AGENCOURT	BG750477 602709342	AL530478 AL530478
SOUTHWALES			_	AY411659	BC032047	AY411657	BX359243	AY411658	BI412471	CK602460	BG750477	AL530478
			_	6	ന	σ	വ	σ	4	7	4	7
			th	947	1043	902	1045	874	995	789	881	1002
	ф	ery	Match		4	ď.	Ή.	60.8	9.	ω.	9	54.8
			Score	1631	500	1372	(1)	1279	1246	1230	1182.5	1153
		Result	No.	-	7	m	4	S	9	7	œ	9

7		4	. Ļ	-	TENSES	20555 ma07h
098.5		22.2	725	4 10	BX922107	BX922107 BX9221
9.5	ı un	0	C	~	F46727	467278 UI-M-
055.5 5		•	9	ω	211665	116659 CH230
1035 4		•	9	Ŋ	X74521	745213 BX745
7.5 4		•	щ	N	F46282	462825 UI-M-
013 4		•	4	9	D36061	360617 AGENC
6.5	4	•	-	<b>-</b>	K34575	345752 L0516
61 4		•	-	4	M05287	052871 1e67d
'n	4	•	m	Н	132706	327069 m£89d
51 4		•	m	រប	<b>U07225</b>	072252 im44c
.5		•	9	~	F28899	288999 EST45
27 4		•	4	~	F46647	466470 UI-M-
16 4		•	4	7	K59919	<b>599195 AGENC</b>
15 4		•	5	1	K90386	<b>903866 ie67d</b>
9 4		•	2	σ	NS0310	<b>223884 Tetra</b>
.5		•	S	Н	140765	407650 EST23
06 4		•	4	7	W14188	141881 EST29
78 4		•	7	9	A95004	950044 ir86a
77 4		•	7	7	F43497	434972 7p04a
.5		•	7	7	F46397	463979 UI-M-
61 4		•	-	7	E37853	378534 60123
58 4		•	Э	7	K77846	778467 96562
49 4		•	0	9	B06740	067409 iq36e
.5		•	0	7	F46478	464789 UI-M-
47 4		•	8	Н	132585	325858 m£89d
17 3		•	æ	9	D21660	216600 pgp2n
10.5 3		•	æ	N	<b>B98575</b>	985750 UI-M-
5	m	•	æ	0	E98842	988426 UI-M-
808	m	•	0	4	G76213	762138 60271
02	ጣ	8	σ	ស	X87068	970688 BX870
00	m	8	S	7	K90386	903865 ie67d
00	m	ω.	m	4	M05262	052629 ie67d
'n.	m			7	W43521	435212 UI-R-
72	m	Ġ.	σ	4	M45160	451608 AGENC
68	m	o o	4	σ	<b>Y41054</b>	410547 Homo

## ALIGNMENTS

	AY411659 947 bp DNA linear GSS 16-DEC-2003	llus KCNK3 gene, VIRTUAL TRANSCRIPT	genomic survey sequence.	AY411659	AY411659.1 GI:39767627	GSS.	Mus musculus (house mouse)	Mus musculus	; Metazoa; Chordata; Craniata; Vertebrata; Euteleosto	-	1 (bases 1 to 947)	Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A.,	Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J.,	Adams, M.D. and Cargill, M.	Inferring nonneutral evolution from human-chimp-mouse orthologous	gene trios	Science 302 (5652), 1960-1963 (2003)	14671302		Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B.,	Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Shinsky, J.J.,	Ē	Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive,	Rockville, MD 20850, USA	This sequence was made by sequencing genomic exons and ordering		1947
RESULT 1 AY411659	LOCUS	DEFINITION		ACCESSION	VERSION	KEYWORDS	SOURCE	ORGANISM			REFERENCE	AUTHORS			TITLE		JOURNAL	PUBMED	AUTHORS			TITLE	JOURNAL		COMMENT	FEATURES	source

Ø

8

g

à

ठ

ద

ð

유

g

ò

В

ਠੇ

셤

ਠੇ

ð

名

ð

ð

ò

日

ð

à

2

902

391

. rs

```
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov . Series: IRAK Plate: 31 Row: p Column: 15
This clone was selected for full length sequencing because it passed the following selection criteria: GenomeScan gene prediction, Similarity but not identity to protein This clone has the following problem: no polyA-tail.
Location/Qualifiers
                                                                                                                                20-SEP-2002
                                                                                                                                                                                                                                   1 (bases 1 to 10.1), Strausberg, R. Direct Submission
Submitted (06-JUN-2002) National Institutes of Health, Mammalian Submitted (06-JUN-2002), Cancer Genomics Office, National Cancer Gene Collection (MGC), Cancer Genomics Office, National Linstitute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, Institute, 31 Center Drive, Room 11A03, Pethesda, MD 20892-2590,
                                                                                                                                                                                                               Euteleostomi
              GluAsnValArgThrLeuAlaLeuIleValCysThrPheThrTyrLeuLeuValGlyAla
                                                                                                                                                                                                                                                                                                                                                                                                                                            S.M.
                                                                                                                                                                                                    Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleosto
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
1 (bases 1 to 1043)
                                                                                                                                                                                                                                                                                                                                                                                                                                             1., Hale, S.I
G., Muzny,
                                                                                                                                                                                                                                                                                                               NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Baylor College of Medicine Human Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      old female
                                                                                                                                HTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                      R.G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                             S.
                                                                                                                                  linear
                                                             405
                                                                                    944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1043
292
2
0
1
                                                                                                                                                                                                                                                                                                                                                                                                                                             X., Hulyk, 8
S., Martin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        week
                                                           LeuAlaAlaPheArgGlyLeuMetLysArgArgSerSerVal
                                                                                                                                                                                                                                                                                                                                                                                            Sequencing Center
Sequencing Center
Center code: BCM-HGSC
Web site: http://www.hgsc.bcm.tmc.edu/cdna/
Contact: amg@bcm.tmc.edu
Gunaratne, P.H., Garcia, A.M., Lu, X., Huly
Yoon, V.S., Kowis, C.R., Lawrence, S., Mart
Richards, S., Gibbs, R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                mRNA
mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="taxon:10090"
/clone="IMAGE:4921810"
/tissue_type="Salivary gland
/clone_lib="NCI_CGAP_SG2"
/lab_host="DH10B"
/note="Vector: pCMV-SPORT6"
                                                                                                                                1043 bp
clone IMAGE:4921810,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .1043
/organism="Mus musculus"
/mol_type="mRNA"
/strain="FVB/N"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-1043)
                                                                                                                                                                                        Mus musculus (house mouse)
                                                                                                                                                                  GI:21327815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  x BC032047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.4e-144
1500.50
99.66%
98.98%
71.28%
                                                                                                                              BC032047
Mus musculus, BC032047
BC032047
HTC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-405)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-939-483-5
                                      843
                                                             392
                                                                                   903
               372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment S
Pred. No.:
Score:
                                                                                                                                          DEFINITION
                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
                                                                                                                                                        ACCESSION
                                                                                                                                                                VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                          RESULT 2
BC032047
                                                                                                                                                                                                                                                                                                                 REMARK
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB:
                                      셤
                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                192
                                                                                                                                                                                                                                                                                                                                                                                                                     302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          842
                                                                                                                                                                                                                                                                                122
                                                                                                                                                                                                                                                                                                       152
                                                                                                                                                                                                                                                                                                                             182
                                                                                                                                                                                                                                                                                                                                                   172
                                                                                                                                                                                                                                                                                                                                                                          242
                                                                                                                                                                                                                                                                                                                                                                                                                                               212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   371
                                                                                                                                                                                                                                   62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            alTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCCC
                                                                                                                                                                                                                                                                                                   alser
                                                                                                                                                                                                                                                        LeuGlylleProLeuThrLeuIleMetPheGlnSerLeuGlyGluArgIleAsnThrPhe
                                                                                                                                                                                                                                                                                                                        TGTCC
                                                                                                                                                                                                                                                                                                                                                   yAla
                                                                                                                                                                                                                                                                                                                                                                                                helle
                                                                                                                                                                                                                                                                                                                                                                                                                                             euGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LeuSerCysLeuSerGlySerLeuGlyAsp---ValArgProArgAspProValThrCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sPro
                                                                                                                                                                                                                                   CGCTG
                                                                                                                                                                                                                                                                                                                                                                        GCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                      TCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rcrar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ysval
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         luLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GluHisSerHisSerSerProGlyGlyGlyGlyArgTyrSerAspThrProSerHi
                                                                                                                                                                                                           947
312
1
0
1
                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
/organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
<1. .>947
/gene="KCNK3"
/locus_tag="HCM4297"
                                                                                                                                                                                       (1-947)
                                                                                                                                                                                     US-09-939-483-5 (1-405) x AY411659
                                                                                                        1.09e-15
1631.50
99.68%
99.36%
77.51%
                                                                                                                             Percent Similarity:
Best Local Similarity
Query Match:
DB:
                                                                                             Score
                                                                                                                                                                                                                                                          113
                                                                                                                                                                                                                                                                                                                           123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  303
                                                                                                                                                                                                                                   m
                                                                                                                                                                                                                                                                                63
                                                                                                                                                                                                                                                                                                      133
                                                                                                                                                                                                                                                                                                                                                   153
                                                                                                                                                                                                                                                                                                                                                                         183
                                                                                                                                                                                                                                                                                                                                                                                                                     243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         783
                                                                                                                                                                                                                                                                                                                                                                                                173
                                                                                                                                                                                                                                                                                                                                                                                                                                             193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               663
                                                                                            Alignment S
Pred. No.:
                                                                                                                   core:
                                                                      ORIGIN
```

m

Ø Н

S • S

Б

ઠે

8

ਠੋ

В

ઠે

В

ठ

g

ò

g

8

g

ઠે

셤

ठ

g

8

ઠે

```
Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M. Inferring nonneutral evolution from human-chimp-mouse orthologous
                                                                                                                                                                                          ordering
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LeuGlyIleProLeuThrLeuIleMetPheGlnSerLeuGlyGluArgIleAsnThrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                L Science 302 (5652), 1960-1963 (2003)

C Science 302 (5652), 1960-1963 (2003)

D 14671302

E 2 (bases 1 to 902)

S Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M.

Direct Submission

L Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive, Nockville, MD 20850, USA

This sequence was made by sequencing genomic exons and orderir them based on alignment.

Location/Qualifiers

Location/Qualifiers

Location/Qualifiers

//mol_type="Homo sapiens"//mol_type="Homo sa
                                                                                                      ٩
                                                                                                                                                                  Drive
                                                                                                                                                                                                                                                                                                                                                            900
2000
44
114
                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-902)
                                                                                                                                                                                                                                                                                              /gene="KCNK3"
/locus_tag="HCM4297
                                                                                                                                                                                                                                                                                                                                                                                                                                                   x AY411657
                                                                                                                                                                                                                                                                                                                                                          6.79e-131
1372.00
87.86%
85.94%
65.18%
                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-939-483-5 (1-405)
                                                                                                                                                                                                                                                                                                                                                                        Score:
Percent Similarity:
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          253
                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
DB:
                                                               JOURNAL
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                      TITLE
JOURNAL
                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                    FEATURES
                                        TITLE
                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              名
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16-DEC-2003
Jence,
                                                             276
                                                                                                                                                                                           100
                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                   200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                336
                                                                                                                                                                  396
                                                                                                                                                                                                                    456
                                                                                                                                                                                                                                                                      516
                                                                                                                                                                                                                                                                                               140
                                                                                                                                                                                                                                                                                                                       576
                                                                                                                                                                                                                                                                                                                                                160
                                                                                                                                                                                                                                                                                                                                                                           636
                                                                                                                                                                                                                                                                                                                                                                                                                          969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    966
                                       40
                                                                                         9
                                                                                                                                         80
                                                                                                                                                                                                                                                                                                                                                                                                Gluarg
||||||
|GAGCGC
                                                                                                                                                                                                                                                                                                                                             legly
|||||
rcggr
                                   |||||
GCCTG
                                                                                                                                       11, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            erLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GSS 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (human)
Homo sapiens
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutel
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
1 (bases 1 to 902)
Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwa
                                                                                                                                                                                                                                                                                                                                               al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA linear
TRANSCRIPT, parti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          902 bp
VIRTUAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AY411657
Homo sapiens KCNK3 gene,
genomic survey sequence.
AY411657
AY411657.1 GI:39767625
GSS.
                                                               217
                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     997
                                                                                                                                                                                           81
                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                       577
              57
                                                                                                               277
                                                                                                                                                                                                                  397
                                                                                                                                                                                                                                                                                                                                                 141
                                                                                                                                                                                                                                                                                                                                                                                                                          637
                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            281
                                       21
                                                                                         41
                                                                                                                                         61
                                                                                                                                                                337
                                                                                                                                                                                                                                                                     457
                                                                                                                                                                                                                                                                                                                                                                                                  161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 3
AY411657
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
```

132

62

152

172

242

182

192

302

212

362

232

422

252

482

272

```
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             874
Jene, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LeuThrHisAsnGlyGlnAla
||||
|TCAMGCGCAAMGGGCAGGCG
                                                                           x BX359243
1287.00
96.25%
93.26%
61.14%
5
                                                                          (1-405)
 Score:
Percent Similarity:
Best Local Similarity
Query Match:
DB:
                                                                          US-09-939-483-5
                                                                                                                                                                          230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            290
                                                                                                                                                                                                                                                                                                                                                                          470
                                                                                                                                                                                                                                                                                                                                                                                                                            530
                                                                                                                                                                                                   41
                                                                                                                                                                                                                         290
                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                           350
                                                                                                                                                                                                                                                                                                    81
                                                                                                                                                                                                                                                                                                                           410
                                                                                                                                                                                                                                                                                                                                                   101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            890
                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                   21
                                                                                                                                                                                                                                                                                                                                                                                                                                                    141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 5
AY411658
LOCUS
DEFINITION
                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <del>d</del>
                                                                                                  õ
                                                                                                                                                                          셤
                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                          ದ್ದ
                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <del>Q</del>
                                                                                                                                                  ð
                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ਠੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Five prime and cloned or Library ogies, a cluster
                                                                                                                                                                                                                                                                                                                                                                          08-APR-2004
piens cDNA
                                                                                                                         680
                                                                                                  332
                         581
                                                                                                                                                 352
                                                                                                                                                                         740
                                                                                                                                                                                                  372
                                                                                                                                                                                                                           800
                                                                                                                                                                                                                                                  392
                                                                                                                                                                                                                                                                          860
 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                I-oligo(dT)
nd cDNA was
I and ECOR V
normalized.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             eostomi
                                                                                                                                                                                                                                                erLeu
|||||
|GCCTG
                                                                                                 ysteu
|||||
AGCTG
                                                                       Acccc
                                                                                                                                              -GGTGGCACGCACACTACGGACACCGCCTCATCCACG
LeuSerCysLeuSerGlySerLeuGlyAspValArgProArgAspProValThrCysAla
                                                  YrAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone="CSODIO55YC13"
/tissue type="PLACENTA COT 25-NORMALIZED"
/clone_lib="Homo sapiens PLACENTA COT 25-NORMALIZED"
/note="1st strand cDNA was primed with a NotI-oligo(primer. Five prime end enriched, double-strand cDNA digested with Not I and cloned into the Not I and Ecasites of the pCMVSPORT 6 vector. Library was normalized.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutele Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1045)
Li,W.B., Gruber, C., Jessee, J. and Polayes, D. Full-length cDNA libraries and normalization Unpublished (2001)
On May 5, 2003 this sequence version replaced gi:30374332.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genoscope - Centre National de Sequencage
2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE
Email: segref@genoscope.cns.fr, Web : www.genoscope.cns.fr
1st strand cDNA was primed with a NotI-oligo(dT) primer. F
end enriched, double-strand cDNA was digested with Not I a
into the Not I and EcoR V sites of the pCMVSPORT 6 vector.
was normalized. Library was constructed by Life Technologi
                                                                                                                                                                                                                                              LeuCysSerGlyThrGlnArgSerAlaIleSerSerValSerThrGlyLeuHisSe
|||||||||||||||
|CTGTGCAGCGGGCGCCACGCTCCGCTCGGTGTCCACGGGTCTGCACA
                                                                                                                                                                                                                                                                                                                                                                        BX359243
BX359243 Homo sapiens PLACENTA COT 25-NORMALIZED Homo sapiclone CS0DI055YC13 5-PRIME, mRNA sequence.
BX359243.2 GI:46303841
EST.
Homo sapiens (human)
                                              AlaAlaAlaGlyGlyValGlyValGlyValGlyGlySerGlyPheArgAsnValT
                                                                                                              GAGGTGCTGCACTTCCAGTCCATGTGCTCGTGCCTGTGGTACAAGAGCCGCGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CSODIO55AB07QP1&c=1453 Location/Qualifiers
                                                                         -eccecececerrececaAcerer
                                                                                              GluValLeuHisPheGlnSerMetCysSerCysLeuTrpTyrLysSerArg(
                                                                                                                                                                                                                                                                                                   405
                                                                                                                                                                                                                                                                                                                         899
                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                         GCGCCAGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                         861
                                                                                                                                                                                                                                                                                                393
                                                                       582
                                                                                                                        621
                                                                                                                                                                                                 353
                                                                                                                                                                                                                                                                        801
                        543
                                                 293
                                                                                                313
                                                                                                                                                333
                                                                                                                                                                        681
                                                                                                                                                                                                                        741
                                                                                                                                                                                                                                                373
                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                   RESULT 4
BX359243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                        В
                       8
                                                                       Д
                                                                                                                        a
                                                                                                                                                                                                                                                                                                                         Б
                                                 ð
                                                                                                                                                                        셤
                                                                                                                                                                                                8
                                                                                                                                                                                                                        යු
                                                                                                                                                                                                                                                8
                                                                                                à
                                                                                                                                                ठ
                                                                                                                                                                                                                                                                                                 ð
```

5.17e-122

```
16-DEC-2003 sequence,
                                                         229
                                                                                 289
                                                                                                        349
                                                                                                                               409
                                                                                                                                           100
                                                                                                                                                                                          140
                                                                                                                                                                                                                 160
                                                                                                                                                                                                                            649
                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                    709
                                                                                                                                                                                                                                                                200
                                                                                                                                                                                                                                                                           769
                                                                                                                                                                                                                                                                                      220
                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                      260
                                                                                                                                                                  0
                                                                                                                                                                              529
                                                                                                                                                                                                                                                                                                  σ
                                                                                                                                                                                                                                                                                                                                                 g
                                                                                            9
                                                                     40
                                                                                                                    80
                                                                                                                                                                                                                                                                                                                          88
                                                                                                                                                                                                                                                                                                                                                 94
                                             ArgGinLeuGluLeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGluLeuGlu
|||||||
|GGCAGCAGGAGCTGCGGCGCGTACAACCTCAGCCAGGGCGGCGAGGAGCTGGAG
                                                                                                                                           PhevalSerCysIleSerThrLeuCysIleGlyAlaAlaAlaPheSerTyrTyrGluArg
                                                                                                                                                                                                                                                                                                                                     bp DNA linear GSS
VIRTUAL TRANSCRIPT, partial
249
8
10
0
0
                      Gaps
                                  (1-1045)
                                                                                                                                                                                                                                                                                                                                                                                               AY411658
Pan troglodytes KCNK3 gene, V. genomic survey sequence.
AY411658
AY411658.1 GI:39767626
GSS.
Pan troglodytes (chimpanzee)
                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
SOURCE
```

m

-48

σ 93

-09

uB

```
/db_xref="taxon:10090"
/clone="IMAGE:5142374"
/tissue_type="pooled lung tumors"
/lab_host="DH10B (phage-resistant)
/clone_lib="NCI_CGAP_Lu33"
/note="Organ: lung; Vector: pT7T3D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Gilbert Smith, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /mol_type="mRNA"
/strain="CZECH II"
                                                                                                                                                                                                                                                                                                                                                                                     872
                                                                                                                                                                                                                                                                                                                                                                          rccacctrccgc
                                                                                                                                                                                                                                                                                                                                                            AlaAlaPheArg
                                                                                                                            GCGGCAGCG
                                                                                                                                                                                                                                                                                                                                                                                     861
                                                                                                              293
                                                                                                                                     582
                                                                                                                                                                                                                                                                                     741
                                                                                                                                                                                                                                                                                                                                     801
                                                              273
                                                                                     543
                                                                                                                                                                                                             333
                                                                                                                                                                                                                                     681
                                                                                                                                                                                     621
                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 6
BI412471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                     원
                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                    а
                                                                                                              ठ
                                                                                                                                                              ਠੇ
                                                                                                                                                                                     셤
                                                                                                                                                                                                             ਠੇ
                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                422
                                                                                                 orthologous
                 eostomi
                                                                                                                                                                                                                                                dering
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     euGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LeuGlylleProLeuThrLeuIleMetPheGlnSerLeuGlyGluArglleAsnThrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGGCCAACATGGTGCTCATCGGCTTCTTCTCGTGCATCAGCACGCTGTGCATCGGCGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ThrGlnProGlnTyrValAlaPheSerPheValTyrIleLeuThrGlyLeuThrValIle
                                                                                                                                            Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M.
Direct Submission
Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA
This sequence was made by sequencing genomic exons and ordering them based on alignment.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MetAlaAsnMetValLeuIleGlyPheValSerCysIleSerThrLeuCysIleGlyAla
Pan troglodytes
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutel;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pan.
1 (bases 1 to 874)
Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwa.
Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B.
Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J.
Adams, M.D. and Cargill, M.
Inferring nonneutral evolution from human-chimp-mouse ort
                                                                                                                                                                                                                                                                                                                                                                                                            874
251
6
6
33
14
2
                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                          (2003)
                                                                                                                                                                                                                                                                                            /organism="Pan troglodytes
/mol_type="genomic DNA"
/db_xref="taxon:9598"
<1. .>874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              x AY411658 (1-874)
                                                                                                            gene trios
Science 302 (5652), 1960-1963
14671302
                                                                                                                                                                                                                                                                                                                                              /gene="KCNK3"
/locus_tag="HCM4297
                                                                                                                                                                                                                                                                                                                                                                                                         2.66e-121
1279.00
84.54%
82.57%
60.76%
                                                                                                                                                                                                                                                                                     . .874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-939-483-5 (1-405)
                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                  Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         153
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
  ORGANISM
                                                                                                                                                                                                                                                                                     sourc
                                                                                                                                                                                                                                                                                                                                                                                                            No.:
                                                                                                                       JOURNAL
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                 Alignment
Pred. No.:
                                     REFERENCE
AUTHORS
                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                        FEATURES
                                                                                                 TITLE
                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                         Score:
                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 а
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
```

```
EST 14-AUG-2001
IMAGE:5142374 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vector: pT7T3D-Pac (Pharmacia) with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Euteleostomi
Murinae; Mu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima Bonaldo, Ph.D.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: NCI-CGAP clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Plate: LLAM11350 row: o column: 15
High quality sequence start: 3
High quality sequence stop: 927.
Location/Qualifiers
1. .995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HisserHisserSerProGlyGlyGlyGlyArgTyrSerAspThrProSerHisProCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       --GGCGGCGGCTTCCGCAACGTCTACGCG
                                                                                                                                                                                                                                                                                                                                                                                              AlaAlaAlaGlyGlyValGlyValGlyValGlySerGlyPheArgAsnValTyrAla
                                                                                         ceceacecceaecaccecececrecresces acceses acceses
                                                                                                                                                                                               LeuSerCysLeuSerGlySerLeuGlyAspValArgProArgAspProValThrCysAla
                                                                                                                                                                                                                                                                                         -- AGTGGCAGGGGCACACTACGGACACCGCCTCATCCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Collection (MGC)
Craniata, Vertebrata; E
Sciurognathi, Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BI412471
602985964F1 NCI_CGAP_Lu33 Mus musculus cDNA clone mRNA sequence.
BI412471
BI412471.1 GI:15173394
BST.
Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrat
Mammalia; Eutheria; Rodentia; Sciurognathi; Muric
1 (bases 1 to 995)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Col
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
```

```
100
                                                                                                                                                                                                                                                                  140
                                                                                                                                                                                                                                                                                                                180
                                                                                                                                     176
                                                                                                                                                            236
                                                                                                                                                                                  296
                                                                                                                                                                                                          356
                                                                                                                                                                                                                                416
                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                       476
                                                                                                                                                                                                                                                                              536
                                                                                                                                                                                                                                                                                         160
                                                                                                                                                                                                                                                                                                    596
                                                                                                                                                                                                                                                                                                                                       200
                                                                                                                                                                                                                                                                                                                                                  715
                                                                                                                                                                                                                                                                                                                                                              220
                                                                                                                                                                                                                                                                                                                                                                                     239
                                                                                                                                                                                                                                                                                                                                                                                                          258
                                                                                                                                                                                                                                                                                                                                                                                               834
                                                                                                                                                                                                                                                                                                                                                                                                                      894
                                                                                                                                                                                              80
                                                                                                                                                                       9
                                                                                                                        euGlu
                                                                                                                                                                                                                                          enlle
                                                                                                                                                                                                                                                  TAGTC
                                                                                                                                                                                  TGGAG
                                                                                                                                                                                                      GCTCC
                                                                                                                                                                                                                                                                                                                                               TCGGC
                                                                                                                                                                                             TCGGT
                                                                                                                                                                                                                                                                                                              PheValSerCysIleSerThrLeuCysIleGlyAlaAlaAlaPheSerTyrTyrGluArg
                                                                                                                                                                                                                                                                                                                                                             Ala-P
                                                                                                                                               ||||
GCCCT
                                                                                                                                                                                                                    erThr
                                                                                                                                                                                                                                                                                        legiy
                                                                                                                                                                                                                                                                                                                                       heGly
                                                                                                                                                                                                                                                                                                                                                                                    LeuVa
                                                                                                                                                                                                                                                                                                                                                                                                         "rpThrPhePheGlnAlaTyrTyrCysPheIleThrLeuThrThrIleGlyP|
||||||||||||||||||||||||||
TGGACTTTCTTCCAGGCCTATTACTACTGCTTCATCACCCTCAC-ACCATCGGCT"
                                                                                                                                                                                                                   PheTyrPheAlaIleThrValIleThrThrIleGlyTyrGlyHisAlaAlaProS
                                                                                                                                                                                                                                                                                        AspTyrval - AlaLeuGlnLysAspGlnAlaLeuGlnThrGlnProGlnTyrval.
                                                                                                                                                                                                                                                                                                                                                                   heSerPhe-ValTyrIleLeuThrGlyLeu-ThrValIleGlyAlaPheLeuAsn
                                                                                                                                                                                                                                                                                                                                                                                         995
273
7
9
12
2
                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                              -995)
                                                                                                              BI412471
                                                                      α
                                                                    8.32e-118
1246.00
93.65%
91.30%
59.19%
                                                                                                              ×
                                                                                                              -405)
                                                                                       ₹
                                                                                Percent Similarity:
Best Local Similarity
Query Match:
DB:
                                                                                                              'n
                                                                Score
                                                                                                              -483
                                                                                                                                                21
                                                                                                                                                                       41
                                                                                                                                                                                                                                                     417
                                                                                                                                                                                                                                                                             477
                                                                                                                                    117
                                                                                                                                                           177
                                                                                                                                                                                 237
                                                                                                                                                                                              61
                                                                                                                                                                                                                    81
                                                                                                                                                                                                                              357
                                                                                                                                                                                                                                           101
                                                                                                                                                                                                                                                                                         141
                                                                                                                                                                                                                                                                                                    537
                                                                                                                                                                                                                                                                                                                                                                                    220
                                                                                                                         Н
                                                                                                                                                                                                        297
                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                               161
                                                                                                                                                                                                                                                                                                                           597
                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                  657
                                                                                                                                                                                                                                                                                                                                                             201
                                                                                                                                                                                                                                                                                                                                                                         716
                                                                                                                                                                                                                                                                                                                                                                                                                      835
                                                                                                                                                                                                                                                                                                                                                                                              Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                           σ
                                                                                                                                                                                                                                                                                                                                                                                                           23
                                                               Alignment
Pred. No.:
                                                                                                             US-09-939
                                                                            COL
```

g

ð

셤

ò

원

ð

셤

ਠੋ

셤

ð

g

ò

ద

ð

ద

à

ਠੇ

Б

ð

8

ò

엄

ò

日

ð

```
/organism="Rattus norvegicus"
/mol_type="mRNA"
/db_xref="taxon:10116"
/clone="IMAGE:7192291"
/tissue_type="heart, pooled"
/clone_lib="NIH MGC_234"
/note="Organ: heart; Vector: pExpress-1; Site_1: EcoRV;
Site_2: Not1; RNA obtained from pooled heart tissues were
snap-frozen and female animals at 8 wk old. Tissues were
snap-frozen and kept at -80C for two days before RNA
extraction and purification (Tri-reagent method). cDNA was
primed using oligo-dT primer:
5'-pGACTAGTTCTAGATCGCGAGCGCCCC(T)25-3' and cloned into
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the EcoRV/NotI sites of pExpress-1. Size-selection >1.4kb resulted in an average insert size of 2.2 kb. This primary library is normalized (non-normalized primary library is NIH MGC 233) and was constructed by Express Genomics (Frederick, MD). Note: this is a NIH MGC library."
                                                                                                                                                                                                                      r EST 22-JAN-2004
cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          method). cDNA was
                                              954
                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattus.

I (bases 1 to 789)

Sull-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

National Institutes of Health, Mammalian Gene Collection (MGC)

L Unpublished (1999)

Contact: Daniela S. Gerhard, Ph.D.

Office of Cancer Genomics

National Cancer Institute / NIH

Bldg. 31 Rm10A07 Bethesda, MD 20892

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Howard Jacobs

CDNA Library Preparation: Express Genomics

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: LLAM15052 row: 1 column: 17

High quality sequence stop: 654.
                                                                                                                                                                                                                                                                                                                                                                                                      Chordata; Craniata; Vertebrata; Euteleostomi;
Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       54
35 ArgGlnArgLeuGluLeuArgGlnLeuGluLeuArgAlaArgTyrAsnLeuSerGluGly
                                                                                                                                                                                                                      CK602460

AGENCOURT 17898437 NIH MGC 234 Rattus norvegicus of IMAGE:7192291 5', mRNA sequence.
CK602460

CK602460.1 GI:41115757
                                                                                                                                  99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     789
237
1
3
0
0
                                                                                     Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                              Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          x CK602460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.65e-116
1230.00
98.76%
98.34%
58.43%
                                                                                                                                                                                                                                                                                                                                                                               Rattus norvegicus
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-405)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-939-483-5
                                                                                                                                                                                                                                                                                                                                     EST
 259
                                           895
                                                                                    277
                                                                                                                                  955
                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                  CK602460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB:
                                           d
                                                                                                                                  g
                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
```

\_

S

Ţ Ø Ø

d

ð

엄

a a

8

ద

ઠે

8

ઠે

d

ठ

<del>Q</del>

ठ

d

δ

a

B

ઠે

8

8

```
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:4845658"
/tissue_type="normal pigmented retinal epithelium"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_43"
/clone_lib="NIH_MGC_43"
/note="Organ: eye; Vector: pOTB7; Site_l: XhoI; Site_2:
EcoRI; cDNA made by oligo-dT priming. Directionally
cloned into EcoRI/XhoI sites using the following 5'
adaptor: GGCACGAG(G). Library constructed by Ling Hong
in the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-cDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NIH_MGC Library. | "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lysasp-GlnalaLeuGlnThrGlnProGlnTyrValalaPheSerPheValTyrIleLe
                                                                                                                                                                                                                                                                                                                                                    GluargileasnThrPheValargTyrLeuLeuHisargAlaLysargGlyLeuGlyMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGTGGCAGCGCACACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tAsnAlaGluAspGluLysArgAspAlaGluHisArgAlaLeuLeuThrHisAsnGlyGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nalavalglyLeuglyGlyLeuSerCysLeuSerGlySerLeuglyAspValArgProAr
                                                                                                                                                                                                                                                                                                                                                                                              CysMetPheTyrAlaLeuLeuGlyIleProLeuThrLeuIleMetPheGlnSerLeuGly
  information, at:
                                                                                                                                                                                                                                                           881
251
8
34
19
Clone distribution: MGC clone distribution i found through the I.M.A.G.E. Consortium/LLNL http://image.llnl.gov
Plate: LLCM1685 row: d column: 11
High quality sequence stop: 804.
Location/Qualifiers
                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                  (1-881)
                                                                                                                                                                                                                                                                                                                                 x BG750477
                                                                                                                                                                                                                                                          2.54e-111
1182.50
83.82%
81.23%
56.18%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ĠĠĊĠĠĠĊĠĠĊĠĠĊĠĠĸĠĠĠ
                                                                                                                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity
Query Match:
                                                                                                                                                                                                                                                                                                                                  (1-40)
                                                                                                                                                                                                                                                  Scores
                                                                                                                                                                                                                                                                                                                                  -483-5
                                                                                                                                                                                                                                                                                                                                                                                             107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         242
                                                                                                                                                                                                                                                                                                                                                                                                                  62
                                                                                                                                                                                                                                                                                                                                                                                                                                      127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       246
                                                                                                                                                                                                                                                                                                                                                                          ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                          122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  542
                                                                                                                                                                                                                                                            . No. :
                                                                                                                                                                                                                                                                                                                                   939
                                                                                                                                                                                                                                                  Alignment
                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                  -60-SD
                                                                                                                                                                                                                                                                      core
                                                                                                                                                                                                                                                            Pred
                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                      ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                               ਠੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ਠੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ਠੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ਠੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ਠੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-MAY-2001
658 5',
                                                                                                                                    240
                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                      174
                                                                                                                                                                                                                                                                                                   480
                                                   120
                                                                                           180
                                                                                                                114
                                                                                                                                                        134
                                                                                                                                                                           300
                                                                                                                                                                                                154
                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                               194
                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                234
                                                                                                                                                                                                                                                                                                                                                                                   600
                                                                                                                                                                                                                                                                                                                                                                                                        254
                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                        94
                                74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     eostomi
                                                                                                                                                                                                                                                                               hrLeu
                             ATGGT
                                                                                                                                                                                                                                     CGCAG
                                                                                                                                                                                                                                                                                                                                                                                                        rgAsp
                                                                       YrGly
                                                                                                              alArg
                                                                                                                                                                 CCCTC
                                                                                                                                                                                                                                                                                                                       ThrThrIleGlyPheGlyAspTyrValAlaLeuGlnLysAspGlnAlaLeuGlnThrGln
                                                                                                                                                                                                                                                                                                                                                               GTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                 enSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCAGAGCACCGTGCGTGCTCACGCACAATGGCCCCAGCTGGCGGCCTGGGTGGCCTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BG750477
602709342F1 NIH_MGC_43 Homo sapiens cDNA clone IMAGE:48456mRNA sequence.
BG750477
BG750477.1 GI:14061130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ношо
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: ATCC

CDNA Library Preparation: Ling Hong/Rubin Laboratory

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.
                                                                      IleProteuThrLeuIleMetPheGlnSerLeuGlyGluArgIleAsnThrPheV
                                                                                                                                                                                                                                                                             Eutel
                                                                                                                                                                                                                                                                                                                                     Collection
Vertebrata; I
i; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalian Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vo
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Chordata, Cra
Mammalia, Butheria, Primates, Cat
1 (bases 1 to 881)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Ma
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>=</u>گ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST
                                                   61
                                                                                            121
                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                       115
                                                                                                                                                                                              135
                                                                                                                                                                                                                                                                              175
                                                                       75
                                                                                                                                   181
                                                                                                                                                                                                                                        155
                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           721
           H
                               S
                                                                                                                95
                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                        195
                                                                                                                                                                                                                                                                                                                                                                215
                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                        235
                                                                                                                                                                                                                                                                                                                                                                                                                                                 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 8
BG750477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
```

146

181

166

241

186

а

8

d

ठे

301

126

106

61

Hong

121

361

206

226

421

246

266

481

580

286

Ø

Ø

```
AL530478
  ×
-405)
ß
                                                                                                                                                                                                                                                                                                                                                                    489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              728
                                                                            21
                                                                                                                                40
                                                                                                                                                         249
                                                                                                                                                                                   9
                                                                                                                                                                                                            309
                                                                                                                                                                                                                                      80
                                                                                                                                                                                                                                                                369
                                                                                                                                                                                                                                                                                                                429
                                                                                                                                                                                                                                                                                                                                                                                              140
                                                                                                                                                                                                                                                                                                                                                                                                                                                 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              260
-483
                                                                                                      189
                                                                                                                                                                                                                                                                                         100
                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                      549
                                                   12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 10
AI605559
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
Ó
                                                                                                                                                         셤
                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                원
                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  а
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     d
                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                     පු
                         ò
                                                                            õ
                                                                                                                                ð
                                                                                                                                                                                   ð
                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Five prime
and cloned
r. Library
                                                                                                                  346
                                                                                                                                                                     365
                                                                                                                                                                                              800
                                                                                                                                                                                                                        385
                                     621
                                                                                        681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="nowcours."
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CS0DD007YA05"
/tissue_type="NEUROBLASTOMA COT 50-NORMALIZED"
/clone_lib="Homo sapiens NEUROBLASTOMA COT 50-NORMALIZED'
/clone_lib="Homo sapiens NEUROBLASTOMA COT 50-NORMALIZED'
/note="lst strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized.
                         35525
           Sergl
                                                                                                                                                                                 ACAGT
                                                                                                                hrSerAspThr-CysValGluHisSerHisSerSerProGlyGlyGlyGlyArgTyrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (2001)

On Feb 13, 2001 this sequence version replaced gi:31068311.

Contact: Genoscope

Contact: Genoscope

Genoscope - Centre National de Sequencage

2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE

Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr

1st strand cDNA was primed with a NotI-oligo(dT) primer. Five I

end enriched, double-strand cDNA was digested with Not I and cl

into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Libi

into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Libi

was normalized. Library was constructed by Life Technologies, a

division of Invitrogen.

Location/Qualifiers
                                                            AspThrProSerHisProCysLeuCysSerGlyThrGlnArgSerAlaIleSerSerVal
                                                                                                                                                                                                                                                                                                                                                        linear EST 24-
50-NORMALIZED Homo
                                                                                                                                                                                                                                               cgacagcicircicogargcrióricricidedededegegegecaagcreegerececri
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutel
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
           gAspProvalThrCysAlaAlaAlaAlaGlyGlyValGlyValGlyValGlyGly
                                                                                                                                                                                    -GGCTG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1002
233
9
29
29
                                                                                                                                                                                                                                                                                                                                 AL530478
AL530478 Homo sapiens NEUROBLASTOMA COT 50-NORICDNA clone CS0DD007YA05 5-PRIME, mRNA sequence AL530478
AL530478.3 GI:45705444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  J. and Polayes, D. and normalization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
                                     GGACACCCCCTCATCCACCGGGCCAGCGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .1002
/organism="Homo sapiens"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 1002)
Li,W.B., Gruber,C., Jessee,J.
Full-length cDNA libraries ar
                                                                                                                                                                                                                                                                                                   880
                                                                                                                                                                                                                                                                          SerThrGlyLeuHisSerLeu 392
                                                                                                                                                                                                                                                                                         TCCCGGGGTCTGCACAGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5e-108
                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3.45e-10
1153.00
88.97%
85.66%
54.77%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity
                                                                                                                                                                                                                                                                                                   860
                                                                                                               326
           286
                                                              306
                                                                                       622
                                                                                                                                           682
                                                                                                                                                                     346
                                                                                                                                                                                              741
                                                                                                                                                                                                                        366
                                                                                                                                                                                                                                                801
                                                                                                                                                                                                                                                                          386
                                     581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match:
                                                                                                                                                                                                                                                                                                                                                       LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                             RESULT 9
AL530478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query
DB:
```

В

à

8

ð

요

ð

8

g

```
-MAR-2000
                                                                                                                                                                                                                                         140
                                    œ
                                                                                                                                               368
                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                             160
                                                                                                                                                                                                                                                                                                                                  667
                                                                                                                                                                                                                                                                                                                                                                                         220
                                                                                                                                                                                                                                                                                                                                                                                                          787
                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                             80
                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi; Murinae; Mus
                uArgGlnLeuGluLeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGluLeuGl
|||||||
|GGGCAGCGGNAGCCGGGGGGCGCCACAACCTCAGCCAGGGCGGCTACGAGGAGCTGGA
                                                                                                                            rPheTyrPheAlaileThrValileThrThrIleGlyTyrGlyHisAlaAlaProSerTh
                                                                                                                                                                                                    Wylie,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Al605559
ma07h04.yl Soares mouse p3NMF19.5 Mus musculus cDNA clone
IMAGE:303895 5' similar to TR:035163 035163 TWIK-RELATED
ACID-SENSITIVE K+ CHANNEL; mRNA sequence.
Al605559
Al605559.1 GI:4614726
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eukaryota; Eutheria; Rodentia; Sciurognathi; Muridae; 1 (bases 1 to 677)
Marra, M., Hillier, L., Kucaba, T., Martin, J., Beck, C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-1002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (house mouse)
Mus musculus
```

Ø

Ø

S

-483

```
226
                                                                                                                                                                                                                                                                                                    PheValTyrlleLeu
                                                                                                                                                                                                                                                                                                                                                                                                                             Sus scrofa (pig)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence.
Plate: 0024
                                    303
                                                                                                                                                                                                                                                                                                              663
                                                                               363
                                                                                                      142
                                                                                                                                                   162
                                                                                                                                                                                                                                                                 603
                                                                                                                                                                                               182
                                                                                                                                                                                                                     543
                                                                                                                                                                                                                                            202
                                                                                                                                                                                                                                                                                         222
                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                    RESULT 11
BX922107
                                                                                셤
                                                                                                       ਠੇ
                                                                                                                                                   ð
                                                                                                                                                                         ద
                                                                                                                                                                                                ò
                                                                                                                                                                                                                     සු
                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                    trand cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81
                                                                                                              Fax: 314 286 1810

Email: mouseest@watson.wustl.edu

This clone is available royalty-free through LLNL; contact the

IMAGE Consortium (info@image.llnl.gov) for further information.

This read is a RESEQUENCE of a previously sequenced mouse clone

This read has been verified (found to hit its original self in this read has been verified (found to hit its original)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GlnLeuGluLeuArgAlaArgTyrAsnLeuSerGluGlyGlyTyrGluGluLeuGluArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ann, R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ValPheAspAlaLeuGluSerGluProGluMetIleGluArgGlnArgLeuGluLeuArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               erPhe
              churk,
Underwood, K., Steptoe, M., Theising, B., Allen, M., Bowers, Y., Person, B., Swaller, T., Gibbons, M., Pape, D., Harvey, N., Schurl Ritter, E., Kohn, S., Shin, T., Jackson, Y., Cardenas, M., McCann, Waterston, R. and Wilson, R.

The WashU-NCI Mouse EST Project 1999
Unpublished (1999)
Contact: Marra M/WashU-NCI Mouse EST Project 1999
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA Tel: 314 286 1800
Fax: 314 286 1810
                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ValValLeuArgLeuLysProHisLysAlaGlyValGlnTrpArgPheAlaGlyS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Possible reversed clone: similarity on wrong strand MGI:200655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      677
221
1
1
3
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
                                                                                                                                                                                                                                                                           /organism="Mus musculus"
/mol_type="mRNA"
/db_xref="taxon:10090"
/clone="IMAGE:303895"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-677)
                                                                                                                                                                                                                    Seq primer: -40RP from Gibco
High quality sequence stop:
                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    x AI605559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.1e-106
1136.00
98.67%
98.22%
53.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-939-483-5 (1-405)
                                                                                                                                                                                                                                 High quali
POLYA=No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ..
80
..
                                             TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment
                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       red
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
```

```
EST 07-MAY-2004 clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gases, Lordon, Contrology, C., Benne, F., Cabau, C., Villeger, S., Soares, M., Bonaldo, F. and Hatey, F.

A Pig Normalised Multi-Tissue cDNA Library
L Unpublished (2003)
Contact: Tosser-Klopp G
Genetique Animale
Institut National de la Recherche Agronomique
Chemin de Borde-Rouge - Auzeville BP27, 31326 Castanet-Tolosan
cedex, FRANCE
Tel: 33 (0) 5.61.28.51.14
Fax: 33 (0) 5.61.28.51.14
Fax: 33 (0) 5.61.28.53.08
Email: tosser@toulouse.inra.fr
Sequence cleaned of vector, adaptator and repetitions. Contact us
at sigenasupport@jouy.inra.fr to obtain the chromatogram of this
                                                                                                                                                                                                                                                                                                                                                           201
                                                                                                                                                                              161
                                                                                                                                                                                                                         482
                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                               542
                                                                                                                                                                                                                                                                                                                                                                                                       602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sus scrofa
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
1 (bases 1 to 725)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Sus scrofa"
/mol_type="mRNA"
/db_xref="taxon:9823"
/clone="scan0024d.b.23"
/tissue_type="mixed"
/dev_stage="from embryos to adults"
/dev_stage="from embryos to adults"
/clone_lib="Sus Scrofa library (scan)"
/note="tissues: adipose tissue, brain, kidney, liver, muscle, ovary, testis, heart, hypothalamus, pancreas, skin, spleen, thymus, placenta, pituitary gland, semina vesicle, small intestine, uterus, adrenals, bulbo uretrigland, cerebral trunk, epididymis, female gonad, gall-bladder, hippocampus, large intestine, male gonad,
ValSerCysIleSerThrLeuCysIleGlyAlaAlaAlaPheSerTyrTyrGluArgTrp
                                                                                                                                                                                                                                                                                                                                                        ThrPhePheGlnAlaTyrTyrCysPheIleThrLeuThrThrIleGlyPheGlyAsp
                                                                                                                                                                                                                                                                                                                                                                                     BX922107

BX922107 Sus Scrofa library (scan) Sus scrofa cDNA scan0024d.b.23 5prim, mRNA sequence.

BX922107

BX922107.1 GI:41138955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24 row: b column:
Location/Qualifiers
1. .725
```

gene

S

```
Tel: 301 443 1706
Fax: 301 443 9890
Email: mEST@mail.nih.gov
Oligo-dT track not found, Not I site shown in beginning of sequence is likely internal to the message. cDNA Library Preparation: M.B. Soares Lab Clone distribution: Researchers may obtain BMAP cDNA clones from RESEARCH GENETICS. It should be noted that Bento Soares is generating a small number of additional specialized non-redundant arrays of BMAP cDNAs whose availability will be considered under appropriate and limited collaborative arrangements Seq primer: M13 Forward POLYA=No.
                                                                                                                                                                                                                                                                                 /organism="Mus musculus"
/mol_type="mRNA"
/mol_type="mRNA"
/mol_type="mRNA"
/strain="C57BL/6J"
/db_xref="taxon:10090"
/db_xref="taxon:10090"
/db_xref="Texon:10090"
/doctor: pr773D-pac (Pharmacia) with a modified polylinker; Site 1: Not I; Site 2: Eco RI; The NIH BMAP Ret4 S2 library is a subtracted library, ultimately derived from mouse retina tissue libraries at various stages of development. For a detailed description of the library from which this clone was derived, please visit our web site at brainest.eng.ulowa.edu. The tissue for this library was contributed by Dr. Xin-Yuan Fu, Yale University School of Medicine
TAG_SEQ=None found"
                         Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ValileThrileGlyTyrGlyHisAlaAlaProSerThrAspGlyGlyLysValPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sArgGlyLeuGlyMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  approaches to facilitate
                                                                                                                         of Mental Health
1. Room 7N-7190, MSC 9643, Bethesda,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        aLy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  630
207
1
0
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        eAsnThrPheValArgTyrLeuLeuHisArgAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
Mismatches:
Indels:
Gaps:
E 1 (bases 1 to 630)

Sonaldo, M.F., Lennon, G. and Soares, M.B.

Normalization and subtraction: two approadiscovery
Genome Res. 6 (9), 791-806 (1000).

8889548

Cont.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (1-630)
                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     x BF467278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7.39e-100
1069.50
99.52%
99.04%
50.81%
                                                                                                                Contact: Chin, H
National Institute of
6001 Executive Blvd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -483-5 (1-405)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GluArgil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               147
                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . No. :
                ORGANISM
                                            REFERENCE
AUTHORS
TITLE
                                                                                            MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-939
                                                                                    JOURNAL
                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                 COMMENT
      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              core:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <del>a</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-DEC-2000
                                                                                                                                                                                                                                                         190
                                                                                                                                                                                                                                                                                                                                                                                                                     270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     574
                                                                                                                                                                           150
                                                                                                                                                                                                                  170
                                                                                                                                                                                                                                                                                                  210
                                                                                                                                                                                                                                                                                                                                        230
                                                                                                                                                                                                                                                                                                                                                                               250
                                                                                                                                                                                                                                                                                                                                                                                                                                                            290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                350
                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    694
                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                 CTCACG
                                                                                                                                                                                                                  ysile
                                                                                                                                                                                                                                  GCATA
                                                                                                                                                                                                                                                                                                                                                                                                                    TCAAC
                                                                                                                                                                           laGlu
                                                                                                                                                                                                                                                       euThr
                                                                                                                                                                                                                                                                                                                                                                            ValileGlyAlaPheLeuAsnLeuValValLeuArgPheMetThrMetAsnAlaGluAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -GCGCACACCACGGACACCGCCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GlyGlyLeuSerCysLeuSerGlySerLeuGlyAspValArgProArgAspProValThr
                                                                                                                                      leAsn
                                                                                                                                                                                                                 linear EST Mus musculus
                                             725
216
4
20
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 630 bp mRNA
.sl NIH BMAP_Ret4 3
                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
      udder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ~
      stomach,
                                                                                                                 (1-725)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ĠĠĊĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠĠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           In-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GI:11536461
                                                                                                                x BX922107
        68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           00
                                           9.16e-10
1098.50
88.35%
86.75%
52.19%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -09
      melanocyt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BF467278
UI-M-CG0p-brq-g-(
UI-M-CG0p-brq-g-(
BF467278
BF467278.1 GI:17
                                                                                                                 (1-405)
                                                              Percent Similarity:
Best Local Similarity
Query Match:
DB:
                                                                                                                S
                                   Scor
                                                                                                                 -483-
                                                                                                                                                                                                                                                                                                                                                                             231
                                                                                                                                                                                                                                                                                                                                                                                                                                                           271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    533
                                                                                                                                                                           131
                                                                                                                                                                                              62
                                                                                                                                                                                                                                    122
                                                                                                                                                                                                                                                                                                                                                                                                                     251
                                                                                                                                                                                                                                                                                                                                                                                                                                        422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                331
                                                                                                                                                       N
                                                                                                                                                                                                                  51
                                                                                                                                                                                                                                                         171
                                                                                                                                                                                                                                                                            182
                                                                                                                                                                                                                                                                                               191
                                                                                                                                                                                                                                                                                                                   242
                                                                                                                                                                                                                                                                                                                                       211
                                                                                                                                                                                                                                                                                                                                                          302
                                                                                                                                                                                                                                                                                                                                                                                                 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ťΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63
                                             ••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ü
                                 Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BF467278/c
LOCUS
                                                                                                                939
                                               red.
                                                                                                                 60-
                                                                                                                 S
                                                                                                                                                                                              В
                                                                                                                                                                                                                                    d
                                                                                                                                                                                                                                                                                                                   <del>Q</del>
                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
a
                                                                                                                                                                                                                                                                           a
a
                                                                                                                                                                                                                                                                                                                                                          а
                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                    à
                                                                                                                                                                          ò
                                                                                                                                                                                                                  ਨੇ
                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ठे
```

166

570

510

126

146

450

Sat

유

ઠે

d

ઠે

В

8

a

δ

원

ठ

d D

8

ð

Ø

S

3  $\infty$ 4

g 3 g

g 0

Q

```
Percent Similarity:
Best Local Similarit
Query Match:
DB:
                                                                                                                                                                 Ŋ
                                                                       Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    303
                                                                                                                                                                                                                                      146
                                                                                                                                                                                                                                                                                                           526
                                                                                                                                                                                                                                                                                                                                  186
                                                                                                                                                                                                                                                                                                                                                                                                      406
                                                                                                                                                                                                                                                                                                                                                                                                                                                    346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          106
                                                                                                                                                                                                               645
                                                                                                                                                                                                                                                             586
                                                                                                                                                                                                                                                                                     166
                                                                                                                                                                                                                                                                                                                                                        466
                                                                                                                                                                                                                                                                                                                                                                                206
                                                                                                                                                                                                                                                                                                                                                                                                                              226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         46
                                                                                                                                                                 -939-483
                                                                                 •:
                                                                    Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 14
BX745213
LOCUS
                                                                                           Score:
                                                                                                                                                                 US-09
                                                                                                                                                                                                               엄
                                                                                                                                                                                                                                                             <del>a</del>
                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ద
                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ਠੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ਠੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ਠੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ਠੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ਠੇ
                                                                                                                                                                                                                                                                                                                                                         -OCT-2002
                                                                    270
                                               206
                                                                                                                                         246
                                                                                                                                                                150
                                                                                                                                                                                                                                      285
                                                                                                                                                                                                                                                                                                                                                                     clone
                                                                                                                                                                                        266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .cho.org)
                                                                                                                                                                                                                                                    30
                                                                                                                                                                                                              90
                                                                                                                                                                                                                                                                                                                                                                                                                                                    leostomi
nae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3AC end
.html
                                                                                                                                                                                                                                    ArgPro
|||||||
CGTCCC
1-00
mic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zhao, S., Shetty, J., Shatsman, S., Tsegaye, G., Geer, K.,
Shartsbeyn, A., Gebregeorgis, E., Overton, L., Russell, D., Cher
Riggs, F., de Jong, P. and Fraser, C.M.
Riggs, F., de Jong, P. and Fraser, C.M.
Rat BAC End Sequences from Library CHORI-230 MboI segment
Unpublished (1999)
Other GSSs: CH230-365B9.TV
Contact: Shaying Zhao
Department of Eukaryotic Genomics
The Institute for Genomic Research
9712 Medical Center Dr., Rockville, MD 20850, USA
Tel: 301 838 0200
Fax: 301 838 0200
Email: szhaoœtigr.org
Clones are derived from the rat BAC library CHORI-230
(http://www.chori.org/bacpac/rat230.htm). For BAC library
availability, please contact Pieter de Jong (pdejong@mail.chc
Clones may be purchased from BACPAC Resources
(http://www.chori.org/bacpac/or ering_information.htm). BAC e
page: http://www.tigr.org/tdb/bac_ends/rat/bac_end_intro.htm]
Plate: 365 row: B column: 9
Seq primer: SP6
Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                     BZ116659
CH230-36589.TJ CHORI-230 Segment 2 Rattus norvegicus genor CH230-36589, genomic survey sequence.
BZ116659
BZ116659.1 GI:23757606
GSS.
Rattus norvegicus (Norway rat)
Rattus norvegicus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutelomammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murin Rattus.
                                                                                                                                                                                                                                   AlaValGlyLeuGlyGlyLeuSerCysLeuSerGlySerLeuGlyAsp---ValA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Rattus norvegicus"
/mol_type="genomic DNA"
/strain="BN/SsNHsd/MCW"
/db_xref="taxon:10116"
/clone="CH230-365B9"
/sex="Female"
                                                                                                                                                                                                                                                                                   294
                                                                                                                                                                                                                                                                                                         m
                                                                                                                                                                                                                                                                                 Location/Qualifiers
1. .665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       665)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to
                       389
                                                                                                                                                                                                                                                                                                         29
                                                                    329
                                                                                           207
                                                                                                                                                                209
                                                                                                                                                                                       247
                                                                                                                                                                                                              149
                                                                                                                                                                                                                                    267
                                                                                                                                                                                                                                                            83
                                             187
                                                                                                                  269
                                                                                                                                         227
                                                                                                                                                                                                                                                                                   286
                                                                                                                                                                                                                                                                                                                                RESULT 13
BZ116659/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
```

```
EST 18-NOV-2003
TTpA034e14 5',
                                                                                                                                                                                    587
                                                                                                                                                                                                                                                                                                                                                                    245
                                                                                                                                                                                                                                                                                                                                                                                       287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   167
                                                                                                                                                                    145
                                                                                                                                                                                                         165
                                                                                                                                                                                                                                                185
                                                                                                                                                                                                                                                                   467
                                                                                                                                                                                                                                                                                       205
                                                                                                                                                                                                                                                                                                          407
                                                                                                                                                                                                                                                                                                                              225
                                                                                                                                                                                                                                                                                                                                                347
                                                                                                                                                                                                                                                                                                                                                                                                          265
                                                                                                                                                                                                                                                                                                                                                                                                                             227
                                                                                                                                                                                                                                                                                                                                                                                                                                                 284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BX745213 XGC-tadpole Xenopus tropicalis cDNA clone TTpA034e14 5', mRNA sequence.
BX745213
BX745213.1 GI:38417953
BX745213.1 GI:38417953
EST.
Xenopus tropicalis (western clawed frog)
Xenopus tropicalis
                                                                                                                                                                                                                                                                                       aLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GlnLysAspGlnAlaLeuGlnThrGlnProGlnTyrValAlaPheSerPheValTyrIle
                                                                                                                                                                                                                                                                                                                                                                   /cell_type="Brain"
/clone_lib="CHORI-230 Segment 2"
/note="Vector: pTARBAC1.3; Site_l: MboI; Site_2: MboI
CHORI-230 Rat (BN/SSNHSd/MCW) BAC library produced by
Pieter de Jong"
                                                                                                                                                                  Φ
                                                                                                                                                                                                        337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   665
1
2
2
4
2
2
                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                 (1-665)
                                                                                                                                                 BZ116659
                                                                           2.24e-98
1055.50
97.67%
97.21%
50.14%
                                                                                                                                                  ×
                                                                                                                                                 (1-405)
```

```
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                              791-806
                                                                                                                                                                                                                                                                                                                                                                            musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                   discovery
Genome Res. 6 (9), 7
97044477
8889548
                                                                                                                                                                                                                                                                     813
                                                                                                                                                                                                                                                LeuThrHisAsn 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20892-9643, USA
Tel: 301 443 1706
Fax: 301 443 9890
                                                                                                                                                                                                                                                                    TTGGCAGGAAAC
                                                                                                                                                                                                                                                                                                                                                                                       musculus
                                                                                                                                                                                                                                                                                                                                                                   EST.
                                                                                                                                                                                                                                                                                                                                                                            Mus
                                                                                                                                                                                                                                                                                                                                                                                       Mus
                                                                                                                                                                                                                                                261
                                  161
                                                     502
                                                                          181
                                                                                               562
                                                                                                                    201
                                                                                                                                        622
                                                                                                                                                                                  682
                                                                                                                                                                                                      241
                                                                                                                                                                                                                           742
                                                                                                                                                                                                                                                                     802
                                                                                                                                                                                                                                                                                           RESULT 15
BF462825/c
                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
MEDLINE
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                     요
                                                                                               d
                                                                                                                                                                                                                           d
                                                                                                                                        ద
                                                                                                                                                                                 셤
                                  8
                                                                           à
                                                                                                                    à
                                                                                                                                                             ð
                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                              tadpole
to pCS107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            141 LysArgGlyLeuGlyMetArgHisAlaGluValSerMetAlaAsnMetValLeuIleGly 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             engla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       pole
with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AlayalPheAspAlaLeuGluSerGluProGluMetIleGluArgGlnArgLeuGluLeu
                                                                                                                             (XGC) library
                                                Contact: Croning MDR
Sanger Institute
Hinxton, Cambridgeshire, CB10 1SA, UK
Email: trop@sanger.ac.uk
Sanger Xenopus tropicalis EST project 2001
TROPICALIS SEQUENCE ID: TTpA034e14.plkSP6
Sequencing primer: $P6
This sequence is from a Xenopus Gene Collection (XGC) library
constructed by Nigel Garrett.
cDNA was oligo dT primed from 5ug of poly A+ RNA from tadpole
embryos. EcoRI-NotI cut cDNA was then ligated into pCS107 wit
EcoRI at the 5' end and NotI at the 3' end.
Vector: pCS107; Site 1: EcoRI; Site 2: NotI
Host: Escherichia coli DH10B.
                                                                                                                                                                                                                                                                                                 /note="Vector: pCS107; Site 1: EcoRI; Site 2: NotI; was oligo dT primed from Sug of poly A+ RNA from takembryos. EcoRI-NotI cut cDNA was then ligated into with EcoRI at the 5' end and NotI at the 3' end"
                ...m. and Roge
_2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1., Zorn, A.M. 2001 (11 200
                                                                                                                                                                                                                                                                                                                                                                            892
3391
0 4
0 0
                                                                                                                                                                                                                                                                     -40)
                                                                                                                                                                                                                                                                                                                                                                                                Conservative:
Mismatches:
Indels:
Gaps:
Xenopodinae; Xenopus; Silurana.
1 (bases 1 to 892)
Croning, M.D.R., Ashurst, J.L., Taylor, R. Sanger Xenopus tropicalis EST project 2 Unpublished (2003)
                                                                                                                                                                                                                         /organism="Xenopus tropicalis
/mol_type="mRNA"
/db_xref="taxon:8364"
/clone="TTpA034e14"
                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                     ᠬ
                                                                                                                                                                                                                                                                  dev_stage="tadpole (stage
'lab_host="E. coli DH10B"
'clone_lib="XGC-tadpole"
                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-892)
                                                                                                                                                                                                                                                                                                                                                                                                                                                     x BX745213
                                                                                                                                                                                                                                                                                                                                                                           4.57e-96
1035.00
87.12%
72.35%
49.17%
                                                                                                                                                                                                                                                                                                                                                                                                                                                     -483-5 (1-405)
                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity
Query Match:
                                                                                                                                                                                                                                                                                                                                                                   Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101
                                                                                                                                                                                                                                                                                                                                                                           No.
           REFERENCE
AUTHORS
                              TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                     -09-939
                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                      Score:
                                                                                                                                                                                                                                                                                                                                                                                                                               DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                     S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <del>Q</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            중
```

```
Email: mEST@mail.nih.gov
Oligo-dT track not found, Not I site shown in beginning of sequence oligo-dT track not found, Not I site shown in beginning of sequence is likely internal to the message. cDNA Library Preparation: M.B. Soares Lab Clone distribution: Researchers may obtain BMAP cDNA clones from RESEARCH GENETICS. It should be noted that Bento Soares is generating a small number of additional specialized non-redundant arrays of BMAP cDNAs whose availability will be considered under appropriate and limited collaborative arrangements Seq primer: M13 Forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    clone
                                                                                                                                                                      200
                                                                                                                                                                                                                     621
                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 610)
Bonaldo, M.F., Lennon, G. and Soares, M.B.
Normalization and subtraction: two approaches to facilitate gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                            rGluArg
                                                                                                   modified
                                                                                                                                                                                                AspTyrValAlaLeuGlnLysAspGlnAlaLeuGlnThrGlnProGlnTyrValAlaPhe
                                                                                                                                                                                                                                                                                               TrpThrPhePheGlnAlaTyrTyrCysPheIleThrLeuThrThrIleGlyPheGly
                                                                                                                                                                                                                                                                                                                                                              SerPheValTyrIleLeuThrGlyLeuThrValIleGlyAlaPheLeuAsnLeuValVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear EST 04-DEC
S2 Mus musculus cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a mc
The
                                                                       PheValSerCysIleSerThrLeuCysIleGlyAlaAlaAlaPheSerTyrTy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9643, Bethesda,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .610
/organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="UI-M-CG0p-bni-a-11-0-UI"
/lab_host="DH10B (Life Technologies)"
/clone_lib="NIH_BMAP_Ret4_S2"
/note="Vector: pT7T3D-Pac (Pharmacia) with a polylinker; Site_1: Not_I; Site_2: Eco_RI; Th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BF462825
UI-M-CG0p-bni-a-11-0-UI.s1 NIH_BMAP_Ret4_{UI-M-CG0p-bni-a-11-0-UI 3', mRNA sequence
BF462825
BF462825.1 GI:11532008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Chin, H
National Institute of Mental Health
6001 Executive Blvd. Room 7N-7190, MSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1996)
```

ល

Ţ

Q Ø

```
NIH BMAP Ret4_S2 library is a subtracted library, ultimately derived from mouse retina tissue libraries at various stages of development. For a detailed description of the library from which this clone was derived, please visit our web site at brainest.eng.uiowa.edu. The tissue for this library was contributed by Dr. Xin-Yuan Fu, Yale University School of Medicine
TAG_SEQ=None found"
```

GlyHisAlaAlaProSerThrAspGlyGlyLysValPheCysMetPheTyrAlaLeuLeu 113 133 153 429 173 369 193 309 213 249 233 189 253 129 273 TCGTG laala ||||| |CAGCT TCACC ysarg lyLeu | | | | | |GCCTG leThr TCGGC legly AlaPheSerTyrTyrGluArgTrpThrPhePheGlnAlaTyrTyrTyrCysPheI. 610 199 1 1 1 1 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps: -610)BF462825 1.55e-95 1027.50 99.01% 98.51% 48.81% × (1-405)Percent Similarity: Best Local Similarity: Query Match: DB: Scores -483-5 134 254 94 608 114 548 488 154 428 368 308 234 188 174 194 214 248 Alignment Pred. No.: US-09-939 core <del>Q</del> 셤 g g В 8 ð ਨੇ 셤 Б В ò ઠે ઠે ઠે ઠે ઠે

2005, 10:57:17 16, Search completed: September Job time: 4212 secs AlaAla |||||| GCGGCC

m

8

294

m

ઠ

292

274

8

128

d

68

日

This Page Blank (uspto)